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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS FOR 1991

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

SUBCOMMITTEE ON VA, HUD, AND INDEPENDENT AGENCIES

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PART 7

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Council on Environmental Quality 977

Printed for the use of the Committee on Appropriations

U.S. GOVERNMENT PRINTING OFFICE

30-896 O

For sale by the Superintendent of Documents, Congressional Sales Office
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H181-70

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DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS FOR 1991

WEDNESDAY, APRIL 25, 1990.

ENVIRONMENTAL PROTECTION AGENCY

WITNESSES

WILLIAM K. REILLY, THE ADMINISTRATOR
F. HENRY HABICHT, DEPUTY ADMINISTRATOR
CHARLES L. GRIZZLE, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION AND RESOURCES MANAGEMENT
EDWARD REICH, DEPUTY ASSISTANT ADMINISTRATOR FOR ENFORCEMENT AND COMPLIANCE MONITORING
E. DONALD ELLIOTT, GENERAL COUNSEL
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MICHAEL SHAPIRO, DEPUTY ASSISTANT ADMINISTRATOR FOR AIR AND RADIATION
LINDA J. FISHER, ASSISTANT ADMINISTRATOR FOR PESTICIDES AND TOXIC SUBSTANCES
ERICH BRETTHAUER, ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT
DAVID P. RYAN, COMPTROLLER

OPENING REMARKS

Mr. TRAXLER. We are officially convened.

We want to welcome EPA, the fine staff and Administrator. You are one of our favorite agencies, and justifiably so. We just passed Earth Day and we hope to see many more of them, so we are relying upon you to keep our hands clean.

FY 1991 BUDGET REQUEST

The operating programs in 1989, actual dollars, were $1,745,126,000; the 1990 estimate is $1,936,418,000. The 1991 request is

$2,165,709,000, a growth in the President's recommendations of $229 million. For Superfund, the 1989 actual dollars were $1,410,000,000. The 1990 estimate is $1,530,228,000, and the 1991 request is $1,740,000,000, an increase of almost $210 million.

You are showing good numbers for LUST. For your construction grant program, 1989 actual was $1,950,000,000. The 1990 estimate is $1,991,720,000. The 1991 request is $1,600,000,000, which was an increase over the prior Administration's request. While the Administration request is down nearly $400 million, I am sure you must be very proud of those recommendations that came from the President.

Mr. **Reilly**. Yes, sir.

Mr. **Traxler**. I hope you had something to do with them.

Mr. **Reilly**. I hope so, too.

Mr. **Traxler**. Well, we are delighted of course not only to have you here, but to tell you that this President's request is one of the best this subcommittee has seen in the past 10 years, so congratulations, you get a gold star.

BUDGET ISSUES

Now, having said that, let's put it in perspective. When we do that, we find that for various reasons, and I am sure you will explain this to us, the EPA funding is virtually at the same level as the 1979 appropriations provided, and when we factor in inflation, it means that for all practical purposes during the past 10 or 11 years, the agency has had a steadily eroding budget relative to inflation in the face of increasing public demands for cleaner air, cleaner water, and a greater concern for the nation's environment.

Also, we note that in your 1991 request, as good as it is, the total request is for $5.6 billion, which is the same number as 1990. So we are adding a 12 percent increase to operating programs at the expense, one could argue, of a $400 million cut in the construction grant program. So in some respects we are making progress.

On the other hand, we have got such a long way to go. We were spending more money in prior years. How do you explain that, and what should we say to the American public? We are going to welcome your statement, and we will put it in its entirety in the record, but address for a moment the couple of issues that I have raised in my opening comments.

Mr. **Reilly**. Well, sir, I think the first question that I would focus on is the proportion of expenditure that the Environmental Protection Agency accounts for within the whole spectrum of outlays this society makes for pollution. We are, in a very basic way, in the cockpit allocating and determining the priorities, directing the resources, imposing in many respects the costs throughout the society that are borne for environmental protection, at least for pollution control.

If you look at those costs that way, I think it causes you to ask the question well, do we have that core of support of resources, of brainpower, of capacity, to exercise that responsibility well, and that directs your attention more than to any other thing, more than to construction grants or Superfund outlays or anything of the sort, in my view, to the operating fund program. That is the program that is the core of the core, if you will.

If we are, with our $5.6 billion budget, determining expenditures that are over $80 billion of the broader society now per year for pollution control, we will soon go over $100 billion per year as a consequence of the Clean Air Act reauthorization amendments. Then you have to be very attentive, I think, to whether we have the group, whether we have the bodies, whether we have the right kinds of people, and it is that area that I am particularly concerned about; it is there that I am most proud and satisfied, frankly, about what we have got.

We do have a 12 percent increase in operating funds that support those programs. That is a substantial amount in this budget. It is not obviously as much as a lot of us might like, but I think it is more than respectable. I think it is in the right direction, it is a significant amount and it is attending to the most important part of our budget.

OPERATING BUDGET

Mr. **Traxler**. Before we take your statement, I think it is important, and I appreciate the fact that you mention your operating budget. As a matter of fact, we are very modest on this side of the table, but for the insistence of members of this subcommittee and my predecessor who was the Chairman, the operating funds would be substantially less over the years than what we see today.

As a matter of fact, the subcommittee added, and I am sure with your approval, over 200 people last year to your operating budget, and so far you have only been able to get how many released from OMB?

Mr. **Reilly**. I think about 100——

Mr. **Grizzle**. One hundred forty-five.

Mr. **Traxler**. So we have got a little way to go yet. What, another 50 or so?

Mr. **Reilly**. I seem to recall we are down to 48.

Mr. **Traxler**. Now, the interesting thing is those were congressional add-ons, the fact is you are having a devil of a time getting them released from OMB. But in this year's budget the request is for over 900. How long will it take you to get those 900, or are they going to come because they originated within the agency and had the approval of OMB?

Is there some message that we are supposed to get over here? What does all that mean to us? If we think of it, it is not a good idea, but if they think of it, you get the staff? Translate that for us, please.

Mr. **Reilly**. If you go back to the beginning of the Bush Administration, you see that we have added close to 2000 new FTEs. It is not much short of that. That, on the base of 15,000 or so is a pretty significant number. It is—we added some 500 for Superfund this past year for enforcement.

I must say that ramping up rapidly has proved more difficult than we had thought. We, I think, managed to net out somewhere around 300 of those new employees, and we haven't been able to add to them as fast as we could. So one could make the argument that those new people will not come on perhaps as fast, and we can't add as sufficiently as we might.

I will leave it with that. I think the 2,000 number or close to it is a pretty significant number for what have we had, 15 months?

Mr. **Traxler**. Yes. Well, you are moving in the right direction.

Mr. **Reilly**. Yes, sir.

Mr. **Traxler**. Let's take your statement.

Mr. **Reilly**. Thank you, Mr. Chairman.

I am really delighted with your opener, your positive comments on the budget, your suggestion that we are one of your favorite agencies. You are one of our favorite committees.

Mr. **Traxler**. Well, we will talk about the Chicago Regional Office later.

INTRODUCTION OF EPA STAFF

Mr. **Reilly**. Let me begin, if I might, by introducing some of my colleagues, at least those who are here at the table with me. On my right is the Deputy Administrator, Henry Habicht. Over here on the left is the Assistant Administrator for Administration and Resources Management, Charles Grizzle. To his left is LaJuana Wilcher, Assistant Administrator for Water, and to her left, as you know, is Bill Rosenberg, Assistant Administrator for Air and Radiation.

Mr. **Traxler**. That is a hot seat, isn't it? I imagine he is very popular around town.

Mr. **Reilly**. He is radiating, I think, in that role, and I must say very creatively and productively from my point of view and I think certainly the President's.

To Hank's right is Dave Ryan, Comptroller of the Agency.

Mr. **Traxler**. How many years have you been as comptroller?

Mr. **Ryan**. Four years now.

Mr. **Traxler**. Getting to be an old hand here.

Mr. **Ryan**. Very old.

Mr. **Reilly**. And to his right is Erich Bretthauer, Assistant Administrator for Research.

I will introduce some of the other AAs as they come up to the table, if I might. Let me say that one is not here today, Jim Strock, the Assistant Administrator for Enforcement. I suggested to him that he let his Deputy, Ed Reich, who is here, be here today. He is participating in a meeting, the first that we have had of the Deputy Administrators for enforcement coming from all across the country. Major priority, significant coordination need, and I think worthy of his time there, and Ed is prepared to take any questions on enforcement.

PRESENTATION OF STATEMENT

I believe that the budget—and with your permission I will ask that my statement be included in the record—our budget here does represent good news for the environment. This is a time, and I think Earth Day symbolized this, of renewed recognition and commitment to the environment. We are critical at EPA obviously to fulfilling that commitment, and our budget as I mentioned a minute ago is the core, and we are to a large degree the cockpit for fulfilling, in a practical way, the expression of hope and the aspirations that people have for the environment that were so dramatically suggested just out on the Capitol steps a couple of days ago.

STRATEGIC PLANNING

Our operating programs are the core of the core, if you will, and it is they that are up 12 percent, the $2.17 billion, $230 million more this year, and 13,204 workyears. We have undertaken last summer an exercise in strategic planning that is based on two principal priorities and concerns.

First of all, we want to assess our programs across the board with respect to risk, and to risk reduction, asking the question, how can we best reduce risk to health; how can we best reduce risk to ecological systems; to natural systems? And taking from that an important principle that we hope to apply across the board to our programs as well.

Can we design our programs; can we give expression to our policies in such a way that we prevent pollution in the first place; that we, recognizing all of the gains, but also all of the costs entailed in cleaning up pollution at the end of the pike, can we simply prevent it from the start?

Eventually we would hope that this strategic planning process will take a longer term perspective on the Agency, and will have a profound effect. We will cause these questions to be asked more consistently and we will give more direction and coherence to the overall activity of the Agency in all of our programs.

SUPERFUND PROGRAM

Superfund has been the Agency's most visible, and I suppose probably its most controversial program. Since we met here a year ago we have conducted a management review of that program and identified some key principles that should characterize future directions for Superfund.

The most important of those is enforcement first. We want to make clear to all responsible parties that we are serious about enforcing the Superfund law; that there will be aggressive, consistent enforcement activity and I think that that priority is to some degree responsible for the success that we had with the Superfund program over the past year, measured in terms of largest number of settlements that we have had ever; the largest amount of private funds committed to cleanup, over a billion dollars, almost a doubling in funds for that compared to the year before.

For the Superfund program, the President is proposing $1.74 billion; that is as you mentioned an increase, it is a 14 percent increase of $210 million total.

CONSTRUCTION GRANTS

On construction grants, we are proposing $1.6 billion, and we are proposing that these funds be allocated to capitalize the state revolving funds. We are also including in this about $16 million for the Tijuana treatment facility in San Diego, Tijuana, to carry that out. It has been a troublesome sore point for some time.

Mr. TRAXLER. Is that pursuant to an international agreement?

Mr. **Reilly**. We reached an understanding with the government of Mexico on this, and are now hoping that we will be able to make the down payment on that understanding with these funds, though we have not got all of the issues associated with that ironed out at this time. Enforcement is an issue of priority to which I give great importance.

ENFORCEMENT

I mentioned we had a banner year last year in terms of enforcement. We had some 4000 administrative orders, up 33 percent over the year before. We are proposing a 20 percent increase in funds for enforcement, an increase of some $19 million for hazardous waste enforcement.

I think that enforcement can serve to put a floor of expectations under all of our programs, it can add productivity and effectiveness to those programs, can promote voluntary compliance to the degree that the public and the regulated community understands that enforcement will get priority and we will be vigorous about it.

CLEAN AIR

Clean air is something to which we have given the highest priority over the past year, and this budget reflects a significant increase for clean air, some $83 million more, 249 new workyears. Of that increase, $38 million would go to the states in grants for the large responsibility they will bear under the newly authorized Clean Air Act as we envision it.

CLEAN AIR RESOURCES

I should say that I know there is a great deal of concern about the resources available and needed to carry out responsibilities that we will bear under the Clean Air Act. Let me simply say that we are very sensitive to those. We have ourselves a very large incentive to make sure that, particularly the innovative portions of the law the President proposed, the acid rain trading system, the new approach to air toxics, that these are effectively brought on, well managed and crafted, and are viewed as a success.

We obviously do not yet know the precise configuration of the new clean air law that will pass, but we will be prepared to look at it and relate any changes that may have overtaken us since we prepared this budget, as it seems to be necessary.

CRITICAL HABITAT

Mr. **Traxler**. Does that include requesting a supplemental?

Mr. **Reilly**. At this time I can't say. I would rather not. Let me just say that I have seen the CBO numbers on the Clean Air Act and know the huge differential, and there are some very different assumptions made by other analysts and ourselves. It is something I just want to alert you to, that we are fully aware of, and bearing in mind that in this instance many of the reporting requirements, milestones and new initiatives that we are going to have to make work were our idea.

We have more than a passing concern to make a success of it.

Mr. TRAXLER. You have got some good numbers here out of OMB. Did you have to promise that you would not request any supplementals?

Mr. REILLY. No, sir.

Mr. TRAXLER. Other agencies have had to make a promise, that is the only reason we are asking you. So in any event, if the Clean Air Act comes out, we will clearly see you are going to need additional FTEs, you won't hesitate to make the request, if the circumstances require.

Mr. REILLY. We will certainly raise those issues.

We want to elevate the priority in the Agency, given the natural systems, to ecological systems, to coastal estuaries, to wetlands resources, groundwater, to the Great Lakes. And our critical habitats area generally is getting more attention, more funds, proposing some $111 million in that area.

STATE NEEDS

We also are sensitive, and this relates to the discussion we just had, to the large needs of the states which have been documented in so many analyses, some studies that have been prepared, and that I hear about so constantly as I visit with, particularly with governors, and I am pleased to note that we have some $645 million for state capacity building and support.

I mention the additional $38 million for clean air grants; there is more for hazardous waste capacity building. For the first time in this budget, the President is proposing to support some $14 million for nonpoint source management. As you well know, that has been the cap of the water pollution effort in the United States. It had been most persistent and least successfully controlled. So I am particularly pleased by the significance of that element in the budget and the acknowledgement of the Federal role in helping address it.

SCIENTIFIC RESEARCH

Finally, if EPA is the core, I guess our operating funds are the core of the core, then science is the core of the core of the core. We are looking at long-term scientific research, core research, in a more systematic way. The Scientific Advisory Board has made a number of recommendations about the need for us to attend the problems that go well beyond the immediate service of our programs, and of our laws, that try to identify threats to health, threats to ecological systems, technology, perhaps, to address critical environmental problems.

We are proposing a scientific budget for this year of $450 million, that is some $25 million more. A particular increase for the core research component, and for grants to academic researchers, to universities, to institutions with whom we hope to develop a more consistent and dependable relationship, outstanding scientists that we would like to engage in the effort on the part of the country to address science—to bring the best science to bear on environmental policy.

The science budget includes more funds for climate change research, and has specific elements in it for funds for clean air related to alternative fuels and their health effects, for acid aerosols, for the development and design of emissions inventories and methodologies, and for a whole range of health issues.

SUMMARY

In conclusion, Mr. Chairman, let me simply say that I think that we have, to an unusual degree, an opportunity now to help set the direction and the pace of environmental policy in the United States. Building on those unprecedentedly high expectations that all of the polls disclose that people have toward the environment, building on the lessons learned in Eastern Europe, where I think we have seen more starkly than in any other place the consequences of an effort to set environmental protection to one side while growth is given exclusive attention and exclusive priority.

It didn't work, and I know, I think to a degree now that we have not certainly had driven home to us before, that failure to protect natural systems, to attend to environmental consequences, leads to a degraded environment and a direct impact on our economy.

I find that increasingly ministers from other countries look to the United States, say to us you are in a position to convey to us the successes that you have had, to bring your assistance, to give us advice on strategy and priorities; and that is a role that I think allows us to express some of the best parts of our culture and our society, one that I very much hope we are going to be able to do proudly and effectively as we build upon strong continuing success in the United States.

That concludes my opening statement, Mr. Chairman.

[The statement of Mr. Reilly and the biographies of new witnesses follow:]

STATEMENT OF WILLIAM K. REILLY, ADMINISTRATOR

U.S. ENVIRONMENTAL PROTECTION AGENCY

HOUSE APPROPRIATIONS SUBCOMMITTEE HEARING

ON

THE PRESIDENT'S BUDGET REQUEST FOR 1991

Mr. Chairman and members of the Committee: I want to thank the members of the committee for the opportunity to present the President's 1991 Budget Request for the Environmental Protection Agency (EPA). The President's Budget Request contains good news for the environment.

At a time when new money is very hard to come by in the Federal Government, EPA's operating budget will increase by 12 percent if the President gets his request. Our trust funds for Superfund and Leaking Underground Storage Tanks would increase by more than 13 percent.

President Bush means business when he says he is an environmental President. Over the last two years, the Agency's budget for Operating Programs and Trust Funds will have increased by more than $600 million and our workforce by almost 2,000 workyears.

Today, we face a multitude of environmental problems -- local, regional, national and global. Many of these on occasion seem overwhelming. Yet we live at a time of renewed commitment to solving our environmental problems. Concern for the environment is probably at its highest level in history, in this country, around the world, in the public sector and in the private sector. This is why the increase in President Bush's EPA budget request is so significant. We will put the funds to good use.

We have before us a unique opportunity to set the direction and the pace of environmental protection, for this decade of the 1990s and well on into the 21st century. It is critical that we take advantage of this opportunity. The President's Budget request provides the resources we need to meet the challenge.

The Fiscal Year 1991 Budget Request represents my first full budget as Administrator of EPA. As such, it reflects the results of a careful review by myself and my top managers of the Agency's programs and priorities. As part of this process, my Deputy Administrator Hank Habicht and I started a strategic planning process within the Agency. We will use this process as a guide to focusing our attention on reducing the greatest risks to public health and the environment and to preventing pollution before it becomes a problem.

In addition, our budget recognizes the important international role that EPA must play in solving today's global environmental problems. We will work to strengthen our bilateral and multilateral agreements, and improve the international dialogue on Global Climate change.

OVERVIEW

Let me now turn to the budget. The request for our **Operating Programs** totals **$2.17 billion,** an increase of $230 million or 12%. We are also requesting **13,204 workyears.** Our Operating Programs are the foundation of this Agency. They write permits, monitor conditions, and support in-house science that underlie the Agency's effectiveness. Adequate funding for the Operating Programs has been one of my highest priorities.

For our Superfund program, we are requesting **$1.74 billion**, an increase of $210 million or 14%. We are also requesting **3,467 workyears**. The Superfund request provides the resource levels needed to implement the President's initiative in "Building A Better America" by supporting an "enforcement first" approach to Superfund.

The Superfund request level will also enable the Agency to implement the recommendations made to me in the Superfund 90-day Management Review. As a component of our strengthened enforcement program, we project our receipts to increase 65% over FY 1990 in the critical area of financial recoveries and fines. In addition, in 1989, we achieved over $1 billion in settlements with private parties.

In the **Construction Grants** Program we are requesting **$1.6 billion** to accelerate our capitalization of State Revolving Funds. This request will provide a solid foundation for financially secure State Revolving Funds. The States can leverage this capital to provide support for their facility needs. In our Construction Grants request, we are asking for almost $16 million for a special project to help solve a long standing international pollution problem between the United States and Mexico--that's sewage treatment for Tijuana. This is the first request by any President for funds to build a joint U.S.-Mexican sewage treatment plant to solve this problem.

Our FY 1991 Budget Request lays out a number of themes and priorities where we want to see progress over the next several years.

Pollution Prevention

First, Pollution Prevention. We have made enormous progress in the last 20 years in abating pollution. Most major point sources are now under some control.

As we move into the 1990s, however, our strategy for reducing environmental and health risks must evolve to meet new circumstances.

-- We are now faced with trying to control pollutants from large numbers of widely scattered sources.

- Many of our current environmental problems, such as indoor air pollution and ground-level ozone, are linked to thousands--if not millions--of small sources of pollution.
- Our traditional approaches to pollution control are no longer sufficient by themselves to do the job.

If we are to succeed in our mission, pollution needs to be prevented before it becomes a problem. Pollution prevention is one of this Administration's highest priorities, and it is a critical new arena for this Agency. We have already begun the job of infusing in all our programs the philosophy of pollution prevention.

A major goal of this Agency is to promote waste reduction and recycling. Reducing wastes often means greater efficiency in production and avoids the dramatically higher costs -- as evidenced by Superfund -- of later cleaning up and restoring damaged resources. Pollution prevention and recycling will create new markets and new technologies, and should help contain the skyrocketing costs of disposal.

The Agency is making a substantial investment in Pollution Prevention activities. Our request is structured to favor private market incentives and to strengthen State and local capabilities wherever possible. We want to identify options, support demonstration projects, disseminate information, and provide technical assistance.

Enforcement

Another top priority in our budget is Enforcement. Strong, vigorous enforcement of our Nation's environmental laws is the key to EPA's credibility. It is vital to our regulatory functions.

In the past year we have made important progress, setting or approaching record levels in virtually every area of enforcement.

For Example:

- the Agency referred 62 criminal cases to the Department of Justice for prosecution.
- Penalties assessed against violators totalled $42.8 million.
- Active consent decrees reached 588.

– All record high levels for the Agency

We must keep the pressure on. This budget request serves notice that President Bush and EPA are committed to sustained, tough, predictable enforcement of the Nation's environmental laws.

Our experience with Superfund and other programs indicates that strong enforcement ensures better results. It is a fundamental element of the Agency's program and credibility. In just the last two years, our staff has increased by almost 1,000 people devoted to enforcement. The Agency's total budget request for enforcement activities will be $418.5 million and 4,242 workyears. This represents an increase of more than 20% in the dollars available for enforcement.

Hazardous Waste Enforcement will increase by $18.6 million and 95 workyears. This will significantly strengthen the Agency's oversight of cleanups at operating hazardous waste management facilities.

In Superfund, the Agency will even more aggressively pursue enforcement of toxic waste cleanups by responsible parties. (This was one of the results of my 90-day management review.) We have already made a substantial commitment by proposing this past year to use $75 million and to hire 500 new people to support increased enforcement and related activities implementing the Superfund Management Review recommendations.

The Agency will increase enforcement activities under the 1988 Amendments to the Federal Insecticide, Fungicide, and Rodenticide Act. Additional resources will help us develop and implement policies, strategies, regulations, and enforcement cases and carry out other responsibilities.

Clean Air Act

Passage of the Clean Air Act Amendments is one of President Bush's top legislative priorities. In July 1989, the President sent to Congress a comprehensive legislative package, "The Clean Air Act Amendments of 1989." Earlier this month, under the leadership of Senators Mitchell and Dole, the Senate passed a bipartisan compromise bill that offers a real chance of getting a Clean Air bill this year. This represents a historic milestone. Since enactment of new legislation appears likely during this Congressional session, our 1991 budget requests the resources needed to implement the President's bill.

The President is requesting an additional $82.5 million and 247 workyears for the Agency to implement the legislation. These resources will support numerous activities. An increase of $21.5 million is provided for regulatory and guidelines development and technical assistance to the States. In addition, an increase of $9.2 million will be targeted to the mobile source program, including an innovative clean fuels program. The largest area in the Clean Air program is State Grants. In total, $38 million goes to the States in grant money to implement the new legislation.

Critical Habitats

We must vigorously renew our commitment to maintaining the Country's ecological heritage and preserving our natural resources. The FY 1991 request strengthens this Agency's commitment.

The President's budget requests $111 million to increase significantly protection of fragile coastal areas and estuaries, and to provide additional resources as we develop the President's policy of "no net loss" of wetlands. Increases will support the development and implementation of strategies and demonstration projects and fund technology transfer activities for the Chesapeake Bay, Gulf of Mexico, and Great Lakes programs.

Priorities in the Chesapeake Bay program will focus on nonpoint source control projects for the States of Maryland, Pennsylvania, Virginia, and the District of Columbia. Emphasis in the Great Lakes program will continue to focus on Remedial Action Plans.

State Capacity

Another top priority is building State Capacity. The President's Budget recognizes the essential role that federal assistance plays in building the capacity of States to assume critical roles in implementing the Nation's environmental programs. The Agency's total budget request for State Capacity building activities is approximately $644.8 million and 1,415 workyears.

As I have previously stated, the President's Request provides an additional $38.5 million to support State efforts in clean air . This program will support training of State and local personnel, implementation of State permit programs, further development of monitoring networks, and preparation of new State Implementation Plans.

The President's Request also includes for the first time $14.3 million in grant funds for nonpoint source pollution prevention and control programs. Wetlands Implementation Grants will enhance State and Indian tribes wetlands protection activities.

We are also requesting more resources for a Pesticides and Toxic Substances Initiative to strengthen programs in our regional offices related to pesticides in ground-water, farmworker safety, endangered species, PCB removal and disposal, and asbestos abatement activities.

In the waste area, we have a $20 million increase in RCRA hazardous waste capacity-building grant programs because of the permitting load and the enforcement and corrective action load, which is growing. The States will carry about 80 percent of the permitting load under RCRA which is growing dramatically through 1992.

Science

The 1991 President's Budget Request includes $449.6 million and 1,891 workyears for research and development activities, an increase of $25.1 million and 11 workyears over 1990.

The array of environmental issues with which we must deal is broadening dramatically. To repond, we must bring together research and data with regard to broad impacts of human activity on ecological systems and on human health. Long-term research is going to be increasingly important. An increase of $23 million will improve the Agency's long-term research capability.

Funding for academic research grants and centers will increase by $11.8 million. An increase of $1.7 million will strengthen basic research on health risks, primarily by establishing a new Center on Environmental Epidemiology. Our ecological monitoring and assessment program will increase. Finally, $2.6 million is included to ensure that in the future state-of-the-art science is available to guide environmental decision-making.

In FY 1991, we will significantly expand our research to support the federal integrated program on climate change. We will be doing our part in the context of the substantial administration increase in the FY 1991 budget for Global Climate research. Increases will support enhanced research on: natural air emissions inventories; near-coastal ecosystems effects; effects to U.S. fishing beds and species; and analyses of sources and sinks of important trace gases.

Yet, even as we acknowledge the need for long-term research, we cannot neglect our short-term research, which is critical in supporting EPA's regulatory programs. We will also begin to undertake some new research initiatives required by the President's Clean Air Act Amendments, including acid rain, urban air pollution, and toxic air pollution. Other continued clean air research will include alternative fuels, acid aerosols, emissions inventory methodologies, and regional ozone models around major cities.

A $1 million increase in resources will focus on assessing cleanup technologies and effects on ecosystems from oil spills. In addition, we will be accelerating our research activities on wetlands, and on the environmental effects of genetically engineered materials.

In conclusion, let me say that the President's Budget Request for EPA represents a significant commitment by this Administration to ensure that the public is protected from the most serious environmental threats, now and in the future.

This year the Environmental Protection Agency will celebrate its 20th birthday. We will also celebrate the 20th anniversary of Earth Day, which was first held on April 22, 1970. As we prepare to observe these anniversaries, it is appropriate that we renew our commitment to the environment and to the important mission of EPA in protecting and improving it.

Mr. Chairman, I will do my best to answer any questions you and other members of the Committee may have. Thank you.

WILLIAM KANE REILLY
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY

William Kane Reilly was sworn in as Administrator of the U.S. Environmental Protection Agency by President Bush on Feb. 8, 1989. The President announced his appointment on Dec. 22, 1988, and officially nominated him on Jan. 20, 1989. The U.S. Senate unanimously confirmed him nomination on Feb. 2.

Prior to becoming EPA Administrator, Reilly held five environment-related positions during the previous two decades. He was President of World Wildlife Fund-U.S. (1985-89) and President of the Conservation Foundation (1973-89). Those two organizations joined in a formal affiliation in 1985 and Reilly became president of both organizations. He was Executive Director of the Task Force on Land Use and Urban Growth from 1972 to 1973. From 1970 to 1972, he was on the staff of the President's Council on Environmental Quality and, from 1968 to 1970, was Associate Director, Urban Policy Center and the National Urban Coalition. He also served as chairman of the Natural Resources Council of America, an association of all major conservation groups, from 1981 to 1983.

During his presidency of the World Wildlife Fund-U.S., Reilly intensified its mission, the protection of the diversity of life on earth. Between 1961 and 1989, the organization supported 1,371 wildlife and endangered habitat projects in 103 countries. At the Conservation Foundation, he continued its long-standing interest in land programs and initiated new programs in environmental dispute resolution, water toxic subtances control, urban conservation and energy. In 1976, Reilly began a program advocating direct cooperation between business leaders and conservationists in resolving polarizing issues in resources and environmental policy, which resulted in several major consensus-building policy dialogues, including the National Groundwater Policy Forum and the National Wetlands Policy Forum.

Reilly has written and lectured extensively on environmental issues, has served on the boards of various private and public sector organizations and received the Horace Albright Medal for his contributions to national parks and the Alfred B. LaGasse Medal for his contributions to environmental progress.

An alumnus of Yale University, Reilly holds a law degree from Harvard University and a master's degree in urban planning from Columbia University He was born in Decatur,Ill., on Jan. 26, 1940, grew up in Fall River, Mass., and served as a U.S. Army captain (1966 to 1967).

He is married to Elizabeth "Libbie" Bennett Buxton Reilly. They have two daughters, Katherine Buxton Reilly, age 18, and Margaret Mahalah Reilly, age 14. The family resides in Alexandria, Va.

6/89

TIMOTHY B. ATKESON

Timothy B. Atkeson was nominated on June 6, 1989 by President Bush to be Assistant Administrator for International Affairs of the U.S. Environmental Protection Agency a new position that replaces that of Associate Administrator. He has been involved in international issues since 1958 and in environmental issues since 1970 in government and the private sector.

In 1958, Atkeson began a three-year term as Deputy General Counsel with the U.S. Development Loan Fund, followed by a year as Regional Legal Advisor for Latin America, Agency for International Development. From 1967 to 1969, he was the first General Counsel of the Asian Development Bank in Manila, the Philippines. In 1988, he served as Special Counsel to the High Level Review Committee at the Inter-American Development Bank.

When the Council on Environmental Quality was created in 1970 in the Executive Office of the President, Atkeson was appointed General Counsel and served until 1973. He became General Counsel of the congressional Office of Technology Assessment in 1974.

Atkeson has been a partner with the law firm of Steptoe and Johnson in Washington, D.C., since 1975 and was an associate and a partner there between 1962 and 1967. He also was an associate with the Philadelphia law firm of Dechert, Price and Rhoads from 1952 to 1957.

Atkeson was the co-author of "Superfund Deskbook," published in 1986, and "Superfund: Litigation and Cleanup," published in 1985. He has also taught environmental law at Georgetown Law School, Dartmouth College and Catholic University Law School.

A resident of Washington, D.C., Atkeson was born in Philadelphia in 1927, graduated from Haverford College in 1947, attended Oxford University as a Rhodes Scholar from 1947 to 1949 and received a law degree from Yale University in 1952.

He is married to Paula Granger. They have one daughter and seven sons.

DON R. CLAY

Don Clay has been the Assistant Administrator for Solid Waste and Emergency Response since November 1989. He has served the Federal government in top management positions for the past 18 years. He was the Acting Assistant Administrator for Air and Radiation at the U.S. Environmental Protection Agency for one year. Before assuming this position he was the Deputy Assistant Administrator for Air and Radiation.

From 1981 to 1986, Don served as Director for the Office of Toxic Substances in EPA where he was charged with implementing the Toxic Substances Control Act. While there, he led the development of the Federal position on the regulation of biotechnology. In 1983, following a period of great turmoil within the Agency, Don was appointed Acting Assistant Administrator for the Office of Pesticides and Toxic Substances, a position in which he served for nearly one year. In recognition of his achievements, he received the Administrators Award for Excellence.

Before coming to EPA, he held a series of senior level positions at the Consumer Product Safety Commission, including that of the Associate Executive Director for the Engineering and Health Section. Prior to this, he was Deputy Assistant Commissioner for Planning and Evaluation at the Food and Drug Administration.

Don considers himself a professional manager, a role he finds challenging and essential to environmental regulation. He has received several wards for managerial excellence during his career, including the Presidential Distinguished Executive Award for Sustained Extraordinary Accomplishments in Management, 1988; and the Presidential Meritorious Executive Award, 1987. He is a charter member of the Senior Executive Service.

He is a registered professional engineer and holds two degrees in Chemical Engineering from Ohio State University.

BIOGRAPHICAL SKETCH

J. CLARENCE (TERRY) DAVIES

J. Clarence ("Terry") Davies is Assistant Administrator for Policy, Planning and Evaluation of the U. S. Environmental Protection Agency. In this position, he has responsibility for oversight of all agency policies and programs, as well as the regulatory process.

He is a leading authority on environmental research, toxic-substances control and risk assessment.

Prior to his EPA post, he was from 1976 to 1989, Executive Vice President from 1976 to 1989 of the Conservation Foundation, a non-profit environmental research organization. He managed all of its programs, including the Foundation's "State of the Environment" series. He specialized in matters concerning toxics, risk assessment and the control and integrated management of pollution.

From 1973 to 1976, he was a fellow at Resources for the Future, Inc., where he conducted a study on how problems become political issues, with emphasis on environmental issues.

When the Council on Environmental Quality was created in 1970, Davies began a three-year assignment as Senior Staff Member with responsibilities for environmental monitoring and research, technology assessment and toxic substances. During 1969 and 1970, he was a consultant to the Ash Commission where he co-authored the reorganization plan to create EPA.

Davies was the Chief Examiner for environmental and consumer agencies in the Bureau of the Budget from 1965 to 1967.

He was on the faculty of Princeton University from 1967 to 1970 and Bowdoin College from 1963 to 1965. He is an alumnus of Dartmouth College, a member of Phi Beta Kappa and holds a doctorate in American government from Columbia University.

He is the author of "The Politics of Pollution," "Neighborhood Groups and Urban Renewal," and the co-author or co-editor of three other books and numerous articles and monographs dealing with environmental issues.

He has served on the Executive Committee of the EPA Science Advisory Board, on the National Academy of Sciences' Environmental Studies Board, and chaired the National Academy's Committee on Decision Making for Resulting Chemicals in the Environment.

Davies was born in New York City on November 16, 1937, and now resides in Bethesda, Maryland, with his wife, Barbara. They have two children, Elizabeth Davies and Eric Davies.

Biographical Sketch of Prof. E. Donald Elliott

E. Donald Elliott was confirmed unanimously by the U.S. Senate on October 20, 1989 as Assistant Administrator and General Counsel of the Environmental Protection Agency. Elliott is on leave of absence from his position as a professor of law at the Yale Law School, where he has taught since 1981. Professor Elliott specializes in environmental law and toxic torts, torts, administrative and constitutional law, and has authored more than two dozen articles about law in popular publication and professional journals. Recently his article, The Future of Toxic Torts: Of Chemophobia, Risk as a Compensable Injury and Hybrid Compensation Systems, 55 HOUSTON L. REV. 281 (July, 1988), was selected by a peer review jury as one of the outstanding articles of the year in the environmental law field.

From 1985 until June, 1989, Professor Elliott served as Special Litigation Counsel, Corporate Environmental Programs, General Electric Co., where he was responsible for the defense of GE's toxic tort cases. Since July, Professor Elliott has been a special consultant to the Administrator and Office of General Counsel of the Environmental Protection Agency.

Professor Elliott is a 1970 graduate of Yale College (Phi Beta Kappa, summa cum laude) and Yale Law School (1974). Before joining the Yale Law School faculty 1981, Elliott was in private practice with a law firm in Washington, D.C. (Leva, Hawes, Symington, Martin & Oppenheimer) and served as a law clerk to U.S. District Judge Gerhard Gesell and U.S. Circuit Judge David Bazelon. He is a consultant to the Carnegie Commission on Science, Technology and Government, the Federal Courts Study Committee, the Administrative Conference of the United States, and serves as Vice-Chair of the ABA Administrative Law Section's Committee on Separation of Powers.

Professor Elliott was recently selected by Resources for the Future to serve as a University Fellow for 1989-90. He lectured on toxic torts, expert witnesses and privilege as a member of the faculty at the ABA-ALI Environmental Litigation Course (June 26-30, 1989, Boulder, Colorado) and on Planning and Managing Toxic Tort Cases" to ABA-ALI ELI Course, "Hazardous Wastes, Superfund, and Toxic Substances," October 26-28, 1989, Washington, D.C. On November 29-30, 1989, he delivered the Pfizer Distinguished Lecture in tort law at Rutgers University Law School.

F. HENRY HABICHT II
DEPUTY ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY

F. Henry Habicht II was confirmed May 18, 1989 by the U.S. Senate as Deputy Administrator of the U.S. Environmental Protection Agency.

He has been involved in environmental issues since 1981, at the U.S. Department of Justice, in private law practice, and as a public servant and private counselor.

Habicht previously served as Counsel to the Seattle law firm, Perkins Cole, and was Vice President of William D. Ruckelshaus Associates, Washington, D.C. with responsibility for project management and compliance and regulatory counseling on environmental, natural resource and energy issues, with emphasis on the development of safe, effective and efficient technologies in waste management, pollution control and energy development.

He served on the Board of Directors and Executive Committee, Environmental Law Institute, served on a pro bono advisory panel for the Chesapeake Bay Foundation, and chaired the American Bar Association Toxic and Environmental Tort Committee. Habicht also was an advisor to Vice President Bush on environmental and conservation issues during the 1988 Presidential campaign.

From 1981 to 1987, Habicht served in the U.S. Department of Justice, where, for the last four years, he was Assistant Attorney General. Habicht directed the Land and Natural Resources division, which handles all federal government litigation concerning environmental, energy and land and resource management matters. During Habicht's tenure at Justice, the number of civil and criminal environmental enforcement prosecutions there more than doubled. He formed and chaired the National Environmental Enforcement Council, established to promote coordination of federal and state environmental enforcement actions, and was involved in the legislative reauthorization of several important pollution control laws. He previously was Deputy Assistant Attorney General for one year and special assistant to Attorney General William French Smith for two years.

He was an Associate with the Washington, D.C. office of the Chicago law firm, Kirkland and Ellis, from 1978 to 1981.

Habicht is an alumnus of Princeton University, where he was President of the Rugby Club, and he has a law degree from the University of Virginia.

Born on April 10, 1953 in Oak Park, Illinois, he now resides in McLean, Virginia with his wife, Wendy Wilson Habicht, and daughters, Jennifer Alane Habicht and Caroline Lesher Habicht.

1/90

WILLIAM G. ROSENBERG

14215 Rixer Road
Chelsea, Michigan 48118
(313) 475-9736

Born December 25, 1940
New York City, New York
Married, Three Children

EXPERIENCE

1989-present

Assistant Administrator For Air and Radiation, US EPA, Washington, D.C. Appointed by President George Bush as Chief of Air Policy for the U.S. Government. Is responsible for developing and implementing environmental regulations. Serves as lead for USA in international policy development in such areas as acid rain and stratospheric ozone protection.

Duties include development of the first major revisions to the Clean Air Act in 12 years; with generating innovative approaches to environmental protection in emerging ares such as indoor air pollution, radon and radionuclides.

1982-1989

The Investment Group, Ann Arbor, MT and Arlington, VA. Chairman of this firm engaged in the acquisition, development, and finance of income-producing real estate. Principal responsibility for Capital Source series of public funds which raised $147 million in 1986 and 1987, including acquisition of properties.

1977-1982

Rosenberg, Freeman and Associates, Ann Arbor, Michigan President of this real estate development and syndication firm which developed 4,000 units of multi-family housing and syndicated 50 real estate transactions. Co-Managing Partner for development activities, government relations, and syndication acquisitions in eight states.

1975-1977

Federal Energy Administration, Washington, D.C. Appointed by President Gerald R. Ford as Assistant Administrator, Energy Resource Development, responsible for policy in areas of gas, and electric utilities, coal, oil and gas, and financial incentives. Interface between FEA and other Federal agencies regarding accelerated development of energy projects.

1973-1975

Michigan Public Service Commission, Lansing, Michigan Appointed by Governor William G. Milliken as Chairman of State Regulatory Commission with jurisdiction over gas, electric, and telephone utilities and intrastate trucking. Supervised stall of 286 and served as Member of Executive Committee, National Association of Regulatory Utility Commissioners.

WILLIAM G. ROSENBERG(cont'd)

1969-1973 **Michigan State Housing Development Authority, Lansing, MI**
As Executive Director, served as chief executive officer of State Housing Finance Agency. Initiated Bond Financing, underwriting, and financial controls for multibillion dollar program. On behalf of state, led negotiations to establish federal/state relationship to implement subsidized housing programs.

1965-1969 **Honigman, Miller, Schwartz, and Cohn, Detroit, Michigan**
Attorney in commercial law practice including industrial revenue bond financing, corporate finance, taxation, and real estate.

EDUCATION

1957-1961 Syracuse: BA (cum laude)
1961-1965 Columbia University School of Law: JD
Columbia University Graduate School of Business: MBA

PROFESSIONAL ASSOCIATIONS

Michigan Bar Association
Michigan Strategic Fund (1985-1986)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
WATER

LaJuana S. Wilcher
Biographical Information

LaJuana S. Wilcher is Assistant Administrator for Water at the U.S. Environmental Protection Agency.

Ms. Wilcher has an extensive background in environmental issues. Prior to her recent appointment as Assistant Administrator, she was a partner in the Washington D.C. law firm of Bishop, Cook, Purcell and Reynolds, where she specialized in environmental litigation, legal counseling and regulatory interpretation on water, air, hazardous waste and resource recovery issues.

Prior to entering the private sector in 1986, Ms. Wilcher served as Special Assistant to the General Counsel and Assistant to the Deputy Administrator at EPA Headquarters. In these capacities, Ms. Wilcher advised and consulted with senior EPA officials on a broad range of Agency policy and management issues, including regional coordination, budget and personnel matters, congressional relations and interagency coordination. She participated with the Deputy Administrator in management and planning sessions and represented him in a number of key EPA activities.

From February 1983 to November 1983, Ms. Wilcher served as Special Assistant to the General Counsel at the U.S. Department of Agriculture. She represented USDA in negotiations, testimony monitoring and clearance, briefings and other activities concerning immigration reform legislation and agricultural labor issues.

Prior to her federal experience, Ms. Wilcher was a litigation attorney with the law firm of Reynolds, Catron and Johnston in her hometown of Bowling Green, Kentucky. She launched her environmental career in Kentucky, during the summers 1974-1978, as a Naturalist/Interpreter at Mammoth Cave National Park.

Ms. Wilcher graduated magna cum laude in biology at Western Kentucky University, and received her Juris Doctorate from Salmon P. Chase College of Law at Northern Kentucky University in 1980. She recently married Peter Gray, an economist at the Environmental Law Institute.

Mr. **Traxler**. Thank you very much, Mr. Reilly. Mr. Green.

GLOBAL WARMING

Mr. **Green**. To pick up on your comment on world leadership, next week I am going to be serving as one of the House delegates to a parliamentary conference on global environment, which will host delegates from over 55 countries to meet and try to share experiences, and presumably to reach some understandings among parliamentarians as to future goals with respect to the environment, and certainly one of the issues which is going to arise is the global climate change issue.

And I guess there seems to have been some differences of posture over time in terms of where the President seems to be coming from on that issue. Could you clarify what you see as our national posture on the global warming issue at this point?

Mr. **Reilly**. Well, our national policy is to take the issue very seriously. That is reflected in a number of decisions that the President has made, the first of which was a decision to engage very seriously in the process that the United Nations and the world have developed to take a key role by chairing the Response Strategies Working Group on the Intergovernmental Panel on Climate Change, and then to support it, which this President did in a unique way when he spoke to the SPCC this past February in Washington. He is the only head of state who has ever done that.

In December he committed the United States to engage in a treaty on climate change. We expect that negotiation to begin sometime late this year, possibly early next year. We in the United States, will be prepared to begin even earlier than other countries. In fact, we would have preferred to have it begin in September. That treaty we expect will be modeled from the Geneva Convention, and we would assume the process will be similar to what happened with respect to the Montreal Protocol.

That is, we will have specific decisions on various of the greenhouse strategies after we have completed work on the convention.

But let me say that I think the principal concern that has been raised is why the United States has not necessarily, although it received a lot of attention last week, supported specific time tables and targets of CO2, methane, and nitrous oxide reductions at this time.

And I think the simplest answer or explanation for that is that we are in the process—to which we have attached a lot of significance—that is not yet concluded.

Sometime this fall, that report from the IPCC will be proposed and made available for the October Congress in Geneva.

There is no clear rationale for identifying targets and time tables at this moment. That is, nothing is going to be done with them between now and the time that we enter into negotiations.

The key role that the United States is playing for the rest of the world in all of this, beyond what we are doing with the Response Strategies Working Group, in my opinion, is the scientific research.

And I think it's regrettable that there has developed a tendency on the part of some to suggest that well, if you are proposing to do research, then you are probably not proposing to do anything about the problem.

Nothing could be further from the truth. We are, in fact, looking for opportunities to act now and have, in fact, taken a number of them.

The President identified actions in his speech last week that would have the effect of reducing by about 15 percent by the year 2000 the greenhouse gas equivalents that the United States would otherwise have emitted into the atmosphere.

Those are significant, and I think deserve more serious attention than they receive from some of the critics.

But from my point of view, we are on the right track. The policies that we have chosen, the President has decided on, make sense. They are geared to the evolving information; they are also very much responsive to the seriousness of this problem and the potential vast changes that could occur as a result of planetary destabilization.

Mr. **Green**. You have certainly given it a different tone, I would have to say, from what at least some could infer from the President's remarks.

I guess there are some of us who take the position that even before the research reaches its conclusion, we are looking at "Mission to Planet Earth," and the time table NASA gives us for that, we are looking at many years before we get any results.

There will be many of us who would say that well, before then, there are thing we could be doing that would be valuable, not only for the impact on global warming, but for other national purposes.

To some extent, we have got that with the Montreal Protocol, and there are other things we can do by way of conservation that will have other desirable goals.

And therefore, we ought to be proceeding somewhat more seriously down that track, even before the research gets completed.

Mr. **Reilly**. I don't disagree with that, and I think that you will see toward the end of the year, when the National Energy Strategy is developed and made public by Secretary Watkins, that conservation will have a very high priority and high profile.

There is no question that the huge amount of energy the United States is now using is having various effects on our trade balance, on our economic situation generally, on our vulnerability to economic dislocations, to more oil spills, to environmental degradation.

And we have every reason, as you suggest, to deal with it, and I think we will.

COMMITTEE ON EARTH SCIENCES

Mr. **Green**. One more particular item. I would like to raise your role in the Committee on Earth Sciences. Their document indicates that your budget for this year is $26 million in so-called focused dollars, and could you explain exactly what your agency's definition of that and is it the same as that of other agencies that are members of CES?

Mr. **Reilly**. The classifications on global climate have changed so rapidly. My number, when I testified in the Senate, was $43 million, which is a substantial increase in funding within EPA for climate change.

The President's Budget calls for a ten million dollar increase for global change research and development. We divide our own funds among four elements of the Agency. The total for all four is $43 million.

I know that the number they have, and that divides some $8.9 million, the Office of Policy and Planning Evaluation. That is money that pays for our work on impacts, our studies on stabilization and what it would take to stabilize green house gases and also the study of effects.

I might say two unique reports, the likes of which we have seen from no other country, have come out of EPA. We are continuing policy work, work with UNEP, and have $26 million in research and development area. We also have a good deal of work underway there to try to get a fix on the total inventory of U.S. emissions of greenhouse gases and also to continue to do research on effects on forest ecosystems. These efforts are fairly unique to EPA.

That is included, I know, in their number.

The Office of Air and Radiation has some $7.8 million. That is largely to support our service of the Montreal Protocol work. We will be renegotiating the treaty in June in London, hopefully going to a full phase-out of CFCs.

And then the Office of International Activities, $200,000 is allocated there for general coordination of activities; working with the Department of State and with foreign governments on these issues.

The total is $42.9 million.

Mr. **Green**. Perhaps you could, for the record, just reconcile those numbers with Tables one and two.

[The information follows:]

COMMITTEE ON EARTH SCIENCES

EPA's total FY 1991 budget request for Global Change activities is $42.9 million of which $26.0 million is for global change research associated with the Committee on Earth Sciences (CES). This $26.0 million research request is reflected on Table 1 of the FY 1991 Budget Report by CES. The remaining $16.9 million of EPA's FY 1991 Budget request for global change activities is not included in any CES Table because it is more policy oriented. Table 2 of the FY 1991 Budget Report by CES includes research that indirectly "contributes" to the "focused" CES research program.

Mr. **Reilly**. Well, Erich has sent me a note here suggesting CES only reports R&D's budget, and that has gone up some $10 million?

Mr. **Bretthauer**. That is right.

Mr. **Reilly**. Ten point six million.

Mr. **Green**. Now, on another aspect of CES, I guess you are one of the few participants that has both the regulatory role, as well as this research role. How do you see that fitting into the CES activity?

Mr. **Reilly**. Well, CES is largely directed toward getting the Federal establishment to coordinate all of the research that we undertake on climate. So it has not been concerned with regulatory activity and doesn't include efforts actually to get these greenhouse gas emissions down, for example.

But we obviously play a key role in this because of that 15 percent the President cited, the reduction that we proposed from his initiatives by the year 2000, some portion will be the consequence of the Clean Air Act's impact and it's growing portion over time.

Particularly the cap on sulfur dioxide emissions after the year 2000, which will force significantly more conservation and more efficiency, we believe.

So will the reduction in automobile emissions which are themselves greenhouse precursors. So we do have a role there, and I might point out that we have the critical role with respect to the elimination of the largest, so far, of the greenhouse gases that we address: the CFCs which account for a little over a quarter of greenhouse emissions.

EPA is reviewing the substitutes that are being developed for CFCs and overseeing the phasing out altogether of those chemicals.

POLLUTION PREVENTION

Mr. **Green**. Let me turn to pollution prevention. I think this subcommittee is justifiably proud of having put up the first money for the creation of an Office of Waste Reduction at EPA and also for the technical assistance program.

In the industrial context, you look at the pollution prevention program in terms of recycling, but also in terms of changing industrial processes, the inputs of the process itself, so that less comes out even without regard to recycling.

I was wondering how you see your role when you move to the municipal field. Obviously, I am aware of the fact that in your municipal combustor regulations, you use that as a handle to try to force recycling on those municipalities that are going to be turning to incineration or already have turned to incineration.

I guess I had a couple of questions. One, do you have any handle to bring the pressure to recycle on other municipalities that are not going to be going to incineration, or is that a gap in your statutory——

Mr. **Reilly**. Well, let me say that we are very proud of that initiative with respect to the municipal waste combustor rule. It's something that Bill Rosenberg thought up.

If anybody could ask, is there a gap in this area to allow you to affect pollution prevention, I don't think anyone would have seen before that proposal the opportunity there that he did.

That, I hope, is but one of the many opportunities that we have in current law and regulations to try to direct the country increasingly to what we see as a major need and also opportunity area, to simply reduce the volume of pollution at the start, in an efficient way, fully consistent with the objectives of the law we are carrying out now.

In that case, we are reducing the emissions, reducing the volume of the materials that goes into the incinerators, and reducing toxicity by keeping things that shouldn't go into those incinerators out of them.

In a number of other areas dealing with solid waste, we are assessing the opportunities to strengthen pollution prevention incentives.

We have been considering, and I promised that we will make, some legislative proposals in this area before too long. We will do that. We are also focusing attention to what is not a terribly well developed body of thought and opinion and knowledge on this by making state grants available for pollution prevention.

And we have set aside some extramural funds for our own Regional offices to encourage them to develop practical pollution prevention projects.

We are working with other countries, states, and industries, to simply identify some of these opportunities.

We have a number of examples that specific industries have publicized. They are suggestive, I think, of what others can do as well.

But we will be very quick to pick up on those opportunities and look for all sorts of incentives to lay out there, which I think will be welcomed—certainly by the public, and I hope by many of the levels of government—because over time, they should have the effect of reducing not just the environmental load, but the economic costs.

Mr. **Green**. Again, making the industrial analogy that I may, your combustor regulations talked strictly of recycling. Isn't it possible to look at the municipal stream and think of changes in the inputs and processes thereto, so as to reduce what comes out of garbage cans; and do you have any handle on that?

Mr. **Reilly**. Well, one of the most exciting parts, I think, of the Clean Air Act is the air toxics title, which provides some substantial incentives for industries themselves to reduce the volume of——

Mr. **Green**. I am not talking about industry now. I am talking about from industry to municipal solid waste, is it possible; do you have statutory clarity? Is there the knowledge there to change what households emit, so that they emit less waste just the way you have changed industrial processes so that the industries emit less by way of waste?

Mr. **Reilly**. I think to get at some of those problems, we are going to have to look beyond merely regulating or attending to waste and actually look at products, look at economies, look at packaging.

Mr. **Green**. Are you doing any of that?

Mr. **Reilly**. We are doing a good bit of information sharing with the country on approaches that different areas are using to address some of these problems.

There have been some very ambitious proposals in a number of places. We are going to continue to do that, and it's possible that we will do some specific things that go beyond that as a result of the work that we are doing on pollution prevention initiatives.

I think that the area—I have just been passed a note to the effect that the Clean Air Act includes recycling provisions that cover land as well as incinerators.

LOUISIANA STATE IMPLEMENTATION PLAN

Mr. **Green**. Let me turn to one decision that you rendered, and this was in the November 17, 1989, Federal Register, regarding Louisiana State Implementation Plan, the Union Carbide Corporation plant targeted emission reduction plan.

And there you seem to be taking the position that if a plant changes an input process to use a less polluting substance, it does not get credit.

Mr. **Reilly**. I am going to turn to Bill Rosenberg. Are you familiar with that case?

Mr. **Rosenberg**. No, I am not.

Mr. **Green**. Maybe for the record, if you could comment?

Mr. **Reilly**. We will look into it.

[The information follows:]

Union Carbide Emission Reduction Plan

This action involved the Environmental Protection Agency's (EPA's) proposal to disapprove a state implementation plan (SIP) revision submitted by the State of Louisiana for a Union Carbide plant in an ozone nonattainment area in Louisiana. The SIP revision submitted pursuant to EPA's emission trading, or "bubble," policy would have exempted two storage tanks from required controls under the approved SIP. The foregone controls on the storage tanks were to be offset by emission reduction credits from other sources at the plant. Part of the credits were to be obtained by storing less volatile organic compounds in several tanks. The EPA's emission trading policy requires that emission reduction credits in this case come from controls that go beyond a baseline defined as reasonably available control technology (RACT). In this case, RACT is certain hardware controls on the tanks which are independent of the volatility of the liquid being stored. Had Union Carbide increased the volatity of the liquid, they would not be required to install additional controls beyond RACT; by the same token, they cannot get emission reduction credits elsewhere at the plant by reducing the volatility of the liquid stored. Thus, EPA proposed to disapprove part of the credits to be used in this bubble. During the comment period, the State of Louisiana and Union Carbide submitted comments on the proposed disapproval. Both sets of comments reflected the same key concept: that the storage tanks donating credit were not subject to the RACT requirement and that the baseline "actual" emissions should be used. Background information in the submittal did not reflect this concept for EPA's consideration. Therefore, EPA is not considering the validity of these potential credits.

Mr. **Rosenberg**. I will say this; most of the Clean Air Act does give new authority to the EPA to reformulate consumer products that are focusing principally on air pollution results. This could lead to some standards for solvents and pesticides and other things that relate to emissions that will occur as a result of using those products.

And that will be a new area that we will be focusing on along those lines.

RADON

Mr. **Green**. Turning to radon, there is a Pennsylvania State University study that I saw reported which indicated that the levels of radon gas may be substantially higher in the summer than in the winter. And I gather most tests have been conducted in the winter. Has the agency looked into that?

Mr. **Reilly**. Well, the reason that most tests are done in the winter is that is the time when the buildings are all closed up and the radon is more likely to be higher and entrapped.

I am not specifically familiar with that particular study, but we have assumed that we were taking the most cautious, most careful approach in doing the testing in enclosed spaces as we have done it.

Mr. **Rosenberg**. I think even though that may be true, there is more likelihood that there would be radon encapsulated in the home in the winter because of the lack of ventilation that we have.

WETLANDS

Mr. GREEN. One final general question. In the Federal Register of December 21, 1989, you have a notation of your memorandum of agreement with the Assistant Secretary of the Army for Civil Works regarding policy and procedures to be used in determining the type of level of mitigation necessary to demonstrate compliance with Section 404B1 of the Clean Water Act.

The notice goes on to say that a number of Federal agencies have been expressing concern about the wording of the agreement.

Could you fill us in on what that problem is?

Mr. REILLY. Well, the job of regulating wetlands is one that touches people very intimately and raises a great many concerns about property rights and the availability or withdrawal of availability of land that is developable, typically low cost, meeting the missions of their agencies.

It conceivably could be rendered more complicated, more difficult, particularly the coastal area where we have had such a concentration of new growth and population and where there are disproportionate numbers of wetlands.

We did have concerns raised by a number of agencies, by Governors, heads of transportation agencies in the country, by Congressional delegations.

We worked with those agencies and tried to reassure them that in the administration of this program, neither we nor the Corps had any interest in either changing the law because all of this was tied in with what they were proposing to put out on existing law, or of making possible the development of areas in places where there are wetlands, such as Alaska.

And this is where the concern was raised most strongly. The concern was that we would be arbitrarily insistent on mitigation for every recommended alteration we oversaw.

We discovered in the course of defending this policy that nine out of ten of the wetlands permits, that is, development permits we granted in late last year did not, in fact, have mitigation associated with them. We didn't require it, simply because there were not mitigation opportunities.

There were no wetlands around the area to restore, which I think should reflect well on the Agency's ability to administer a provision like this with sensitivity to all of the interests involved.

But overall, we try to advance the conservation objective by avoiding the wetlands, and when you cannot, making sure that you minimize the impact. In so doing we move toward the goal the President has set of trying to staunch the steady eroding of wetlands this country has seen in the last 200 years.

Over half of the wetlands base has been lost in that time. Now, there were a number of changes made in the memorandum that we later issued as policy that were essentially designed to respond to some of those concerns, and the most important of which were the fact that of the flat developable land in Alaska, a huge amount of it, something in the range of 60 percent, appears to be classified technically as wetland.

So I think that that exercise certainly sensitized us even more to the need to have assistance for wetlands identification protection so that we don't continue to address this problem piecemeal in the way that I think will result in further loss of the resources. This requires us to have advance identification of key wetlands, systems for mitigating in advance, perhaps, a comprehensive program to restore wetlands that are degraded or that have drained over time where the hydrology would support the reestablishment if some interventions were made.

Things of that sort that can give more predictability, more reassurance to development interests, and more protection for the wetlands that really matter.

SUPERFUND LIABILITY

Mr. **Green**. Let me turn to one final area that has become a matter of concern to me, and that is the liability that we are creating in the Superfund legislation, or potential perceived liability that really starts to have significant transaction consequences in ways the Congress never anticipated, perhaps never intended.

Let me give you as an example one that was brought to my attention last night when our state bankers' association was in town.

It's not uncommon for bank trust companies to agree to serve as executors and will be written in the wills as executors of estates, and their fee structure was typically determined by state law and the fee structure that the state established doesn't include any assurance for potential Superfund liability.

This banker was telling me that his bank was now trying to figure out what they do about situations where the estate would almost certainly include real estate, because in a sense, they don't know what they are getting.

Do they conduct a Superfund investigation every time someone comes in with a will that is going to involve real estate? That is just one example of many about the kinds of worries that people have out there as they perceive that they can be taking a very large risk of almost open-ended liability.

Have you looked at that at all?

Mr. **Reilly**. Well, we have certainly heard a good bit about it. I think there is no question but that the increase in liability, and the large numbers associated therewith, have sensitized a great many corporations to the need to avoid those practices in the future that have created these past large liabilities.

Sometimes it seems to me that some kind of prospective distinction that makes the liabilities even greater for future activities might be warranted. But we are concerned and sensitive to the secondary liability issue. We are joining with the Justice Department and putting together a task force to try to look at that and to see how serious the problem is and whether there are unintended affects there that we ought to address and whether, as a worst consequence, it might, in fact, get in the way of some cleanup by making responsible companies simply avoid altogether such properties.

Ultimately I think the direction we have to go in this program is one that looks for opportunities to bring on new technology that will reduce the cost of cleanup.

We have been experiencing very high costs, much higher than the program contemplated at the beginning, and we are hopeful that biotechnology and bioremediation may offer some opportunities. We have tried to push that as a priority in the program.

Somebody who is a sort of technology czar now in the Superfund program is looking for ways to encourage people to take more responsibility that, ultimately, we desperately need if we are to move through the National Priority List numbers, 1,222 current sites on the list, with any degree of speed or effectiveness.

Mr. **Green**. Thank you, Mr. Chairman.

Mr. **Traxler**. Mrs. Boggs?

GLOBAL WARMING

Mrs. **Boggs**. Thank you, Mr. Chairman. Thank you very much. It's wonderful to have all of you here and to have this opportunity for an informal discussion.

I think that the global warming is probably the most inclusive environmental issue, and the more the President can push the efficacy of having programs that will minimize the effect of the global warming, the better off the posture of the United States will be everywhere.

For example, the Western European nations, who are looking to 1992, have come together in many instances and have done away with barriers that are ineffective against pollutants. These efforts can have a big influence on the Eastern European nations, particularly when you think of the politics in West Germany and the fact that they will be encompassing East Germany into all their plans.

Another thing is, Bill, that in thinking about the Montreal Protocol and the various kinds of treaties that we have, we should pay particular attention to the fact that the Antarctica Treaty comes up for reconsideration in 1991.

There are 33 nations involved, and if science is the driver that teaches the people in the cockpit, then we have to recognize there has been great collaboration between the United States government, other nations and various scientific organizations, particularly in regard to global warming and Antarctica.

Also you have the possibility of the development of minerals and the adoption of a minerals regime, which would impact significantly on all of the programs in which you are interested.

So I hope that you will be thinking about these issues as well.

Mr. **Reilly**. We are. In fact, we are looking at the changing nature of the situation as it affects Antarctica as a result of a number of countries reversing their positions on the minerals convention, and we are sensitive to some of the needs there.

LOUISIANA WETLANDS

Mrs. **Boggs**. Of course, the preservation and restoration of the wetlands is something that is very, very dear to Louisiana, so much so that in a very severe economic depression, we actually voted for taxes to be reserved for the restoration of activities and other related problems.

I was very pleased to note that you increased the amount of spending for state grants in this regard. We have a situation with wetland reconstitution that is very difficult from my point of view because I am on the Energy and Water Resources Development Subcommittee.

In that subcommittee, we have programs which divert river waters into wetlands. Three of these programs were approved for Louisiana and part of Mississippi. One is nearing completion at Caernarvon.

The second one to go on line was to be the Bonnecarre. This would have influenced Lake Pontchartrain, as well as Mississippi Sound.

Then we had Davis Pond, which is down near the Barataria area.

Of course, you have to have an acceptable cost benefit ratio and, in order to embellish and stimulate the rebirth of wetlands, we had to look at their estuarian productivity as far as fish, oysters and shrimp were concerned.

The cost benefit ratios were good enough for those programs to be inaugurated. But then we came along with the 1986 Water bill, and the Administration, of course, decided that there would have to be a 75–25 split of the cost-sharing of the Federal Government and the states.

One consequence has been that the effective diversion of river water into the wetlands is so costly for the State of Louisiana at Bonnecarre that we have had to abandon that ongoing operation and put it back on hold.

And the suggestion of the state is we go forward with Davis Pond because it would create more wetland enhancement opportunities.

This is a long explanation, but I am very pleased to see that you are giving more money and more attention to state grants in various regards.

Is there any way that these wetland diversions projects and the diversion of river waters into the wetlands could be considered in the encouragement of state funds for the rebuilding of wetlands?

Mr. **Reilly**. Well, our Regional office in Dallas has been working closely with Louisiana to try to identify some of those options and also to try to develop a comprehensive wetlands protection program for the state.

WATER QUALITY COOPERATIVE GRANTS

We have some new resources for water quality, water quality cooperative grants, some $16.5 million dollars that are new this year that are designed to mitigate somewhat, the phase down of the construction grants program and the fact that the set-asides, which formally had been available to states are no longer available.

We have done some wetlands research as well on restoration and creation, and I am not specifically aware whether any of that is undertaken or has been, or could be effective in Louisiana.

I suspect the scale of the resources that we are talking about for those kinds of activities may be beyond the current capacity of the monies that we have available for water. But there are those elements that I just pointed to that could be helpful, and Louisiana is a wholly unique situation, as you know better than I, with respect to wetlands.

I think more than a quarter of all the wetlands of the lower 48 States at least are in Louisiana, which is also losing wetlands faster than any other state.

So we all have a special reason, I think, to take those problems very seriously. And we would be pleased to look into some of those specific needs you described.

The President announced just last week the addition of Barataria—Terrebonne Bay to the National Estuary program, which will make some additional funds available for that part of the problem, at least.

LaJuana, would you like to add anything to that?

Ms. WILCHER. We are and will continue to work with the Corps of Engineers on the coastal wetlands study because of the real significant problems. We have a hundred thousand dollar study with the EPA regional office that was mentioned earlier.

But we do consider it a serious problem, and we will look into it and see if there is anything special we can do about it.

Mrs. BOGGS. It was very important for the Corps to coordinate all of the studies that have been out there, and among the various agencies for so long; and we were able last year to fund the coordinated study by the Corps.

I am delighted that you are cooperating so actively with them. I had noticed on page 3-44 that you had special programs for Louisiana, and that was really why I was asking the question so specifically.

Mr. REILLY. Let me just add that Section 106 grants for states will increase in FY 1991 by $9 million; and we have requested $16.5 million dollars for Section 104(b) water quality cooperative agreements.

That is a total of some $82 million for the entire country, however. Wetlands are, in the purposes you described, supported by those dollars, though the competition obviously is keen.

Mrs. BOGGS. There are various programs for the replenishment, of course, of wetlands, including all sorts of plant production. Some of the programs emanate from the Department of Agriculture.

Mr. REILLY. Indeed, they do.

Mrs. BOGGS. We have a very fine experimental program that Louisiana Land & Exploration Company has down in Golden Meadow, Louisiana. That is another cooperative agency that we can use.

Another part of the budget that I was very pleased about was that the request for nonpoint source programs has been enhanced, because as you know, 41 percent of all of the waters of the United States come past the door of my congressional district.

Mr. REILLY. I never thought of it that way.

LAKE PONTCHARTRAIN

Mrs. BOGGS. We have all the trade and commerce and navigation, but we also have all of the pollutants—industrial, agricultural, manmade, and whatever—so this emphasis is very gratifying to me.

One illustration of the difficulties with nonpoint sources occurs in Lake Pontchartrain.

We have a new foundation to try to clean up Lake Pontchartrain. It's a public-private foundation that the state legislature helped to create, and of course, it is a very large undertaking and will require substantial investment.

I wondered if you were familiar with the project and if, perhaps, you could get someone to tell us ways in which EPA could participate, particularly under the nonpoint source program.

Mr. **Reilly**. The EPA certainly can participate. The grant monies, some of which might be available for Lake Pontchartrain, are available under the nonpoint source program.

The estuary program I mentioned makes additional funds available.

Mr. **Reilly**. It is unlikely that Louisiana would have an additional national estuary in the program, simply because it just got one.

The state revolving fund, which is the largest single pot of money that would go to a specific state from the Federal Government, could be made available for cleanup of this sort.

Not as out-right grants, but as loans to leverage other monies, possibly in creative ways to support bond issues or to engage private resources.

All of them would, I think, bear looking into, and I would be glad to give some special attention to that and just see what the need is and what potentially our role might be in helping fill it.

WOMEN AND MINORITIES IN SCIENCE

Mrs. **Boggs**. Thank you very much.

The emphasis that you place on science leads me to this question. As you are aware, the Task Force on Women Minorities and the Handicapped in Science and Technology recently released their final report highlighting the need to attract more women and minorities into scientific and technological careers.

The Task Force's final report points out that despite an array of efforts over the past decade by government agencies, private foundations, states, and industrial sectors, substantial unrepresentation of these groups continues to exist.

In fact, the report states there is little reason to assume this enormous underutilization will be reversed in the future without substantive changes in our approach to the problem.

What action will EPA take to encourage the participation of more women, minority and handicapped individuals in the technological work force and help reverse these disturbing trends?

Mr. **Reilly**. Well, that is a question that I am very personally concerned about. I recently spoke to a group of students, some 200 students, brought in from all over the country by Howard University and encouraged a lot of these, technical, scientifically trained people to look at the EPA as a place where they might make their careers.

Following the session, we met with the presidents of several historically black colleges to try to design with them some programs that would cause young people early on to consider science and technology careers, and also point them toward the environment where we expect to have very significant needs in the years to come.

We have approximately four-fifths of our workforce that consists of technical or scientific in our professional rank in the EPA. Women and minorities now account for 53 percent of our total work force; 23.6 percent minorities, 47.2 percent women.

We exceeded our overall 1989 EEO goals. Our goal was 52 percent. We achieved 53.7 percent.

I think we are doing somewhat better in placing women and minorities in managerial and executive positions. Minorities increased last year to 10.5 percent of those positions. Women increased more, from 24.7 to 27 percent last year in these categories.

Our senior executive service numbers are not as good; 2.2 to 3.4 percent are minorities. The women did better in that category, increasing from 11.2 to 14.2 percent.

I think we are very attentive to it. I asked our Director of Civil Rights and our Assistant Administrator for Administration to develop a long-term program to accomplish it.

It's a matter, not just of equity from my point of view, but, as I said to these students at Howard, of real self-interest on the part of the EPA.

We are simply missing, I think, a large pool of talent that for our own good and for continued replacing of our ranks we absolutely must attract.

I think we are giving it about as high a priority as we possibly could, and I will certainly continue to follow it personally, as I have done over the past year.

Mrs. BOGGS. Mr. Chairman, on that happy note, I will save my other questions for later.

Thank you.

Mr. TRAXLER. Mrs. Boggs, you may remember Donna Shalai, who was with HUD, sat across the table from us for so many years.

Mrs. BOGGS. Yes.

Mr. TRAXLER. As you know, she is now the President of the University of Wisconsin, a premiere university, next to Michigan, of course.

Mrs. BOGGS. I do know that

Mr. TRAXLER. Of course, we only mention that as administrators and staff who would know that there is life after Washington.

Mrs. BOGGS. She went to New York first; do you remember?

Mr. TRAXLER. She is at the University of Wisconsin now. Very talented lady.

Mr. Chapman?

Mr. CHAPMAN. Mr. Chairman may I inquire of what time you intend to break for lunch?

Mr. TRAXLER. Twelve o'clock. Where I come from, the whistle blows at 12:00, and we observe it.

Mr. CHAPMAN. What time will we reconvene?

Mr. TRAXLER. Two o'clock, because of commitments everyone has. Your questions aren't going to run until noon, are they?

Mr. CHAPMAN. No. I was just wondering, based on discussion with my colleague from Massachusetts, and based on his schedule and so on, I was considering whether or not I should perhaps defer to Mr. Atkins.

Mr. TRAXLER. You mean because he's been here all morning?

Mr. CHAPMAN. When I walk in, my timing is awful.

Mr. **Traxler**. Or perfect.

Mr. **Chapman**. The veins are popping out of his mouth.

Mr. **Atkins**. If the gentleman will yield, he asked me how much patience you are having with Members' questions and the whole concern, and I suggested that as always, the Chairman was giving the Members the widest possible latitude, which I hope would maintain when you got to me.

Mr. **Traxler**. Five-minute rule is the half-hour rule in this committee.

Mr. **Atkins**. Somebody must have taken your stopwatch.

Mr. **Traxler**. In any event, we are with Mr. Chapman.

SUPERFUND SITE—TEXARKANA

Mr. **Chapman**. Thank you, Mr. Chairman. I appreciate it.

Mr. Reilly, I appreciate your being here. My questions are basically local in nature. I have a major problem in East Texas, and I wanted to see if I could perhaps get your thoughts and ideas and try to focus on policy in that I am of the not-so-proud possessor of a Superfund site, and it's the Koppers and Texarkana Wood Preserving sites in the City of Texarkana.

I have written you earlier and had hoped that we could at least discuss some of the things prior to today. But since we are here, let me go ahead and cover some issues that I am concerned about.

That is the cleanup and maintenance of the Texarkana Superfund site. I know that EPA's number one goal with regard to the cleanup of these sites is to safeguard public health, and I know that you, in particular, take that goal very seriously.

I am concerned, however, that in implementing the policy, sometimes the health implication to the people doesn't get addressed in some of the proposed remedies and particularly in my case, I have 78 families living on top of a Superfund site.

First, I was a bit curious, out of all of the priority lists, how many Superfund sites actually have people that sleep on top of them? Do you have any idea?

Mr. **Reilly**. No, sir, I don't. I don't.

Mr. **Chapman**. Would it be a small number, or do you think that could be—my situation is I have 79 houses built in a subdivision right on top of an old creosote plant, and I just wondered if that is something that is unique.

Mr. **Reilly**. Not unique, no, sir. We find school playgrounds, housing subdivision, plants, factories that overlie materials that often people had no idea that they discover when they redevelop or build a basement or something of the sort.

But I don't know what the number would be.

Mr. **Chapman**. Well, I had no idea how unusual it might be, and therefore what kind of problem it might represent from the standpoint of cleanup and clean-up efforts.

Now, if I may, and it will take me a couple of minutes to do this, but let me run through with you basically the chronology of what has happened in my particular situation.

CARVER TERRACE

The site that was contaminated by creosoting operations which ceased operations in the 1960s. There was a subdivision called Carver Terrace. It was built on the site several years later, and the site was placed on the Superfund list in 1984.

The cleanup plan chosen for the site was four years later, which was mechanical soil washing, and the EPA press release dated in October of 1988, said that it would begin in 1990, but would not complete the operation until 1992.

As a short-term remedial action, EPA ordered Koppers to replace some soil and sod in some of the residential yards to prevent people from coming into direct contact with the contaminated soil while the site was being studied and the plan was being developed. And that was in an EPA press release in October of 1988.

EPA RESPONSE

In May of 1989 in response to a letter from me expressing reservations about the effectiveness of the cleanup plan, EPA, through Region 6, responded with a letter that explained, and I am quoting from EPA's letter that, "* * * the hazard risk to the people of the Carver Terrace subdivision * * *," the letter noted that the "* * * assessment evaluation demonstrated that the increased lifetime risk of cancer is small (seven chances out of 10,000) when compared to the cancer risk of one out of three for most Americans * * *."

It went on to say that "The Agency believes that the residents are in no imminent and substantial endangerment." That is a quote from a letter.

I quote again, "The Agency, however, believes that there is a long-term threat that warrants remedial action," and I am quoting from the letter.

At the time, May the 30th, 1989, that I got that letter from Region 6, I was unaware of a health assessment that had been prepared on Koppers' Texarkana site by the Agency for Toxic Substances and Disease Registry, and that had been released less than a month earlier, which indicated a higher level of contamination on the site than had originally been estimated, as well as a possibility of off-site migration contaminants.

SOIL CONTAMINATION

Now, this EPA assessment noted, and I quote from the assessment, "Long-term exposures to contaminated soils in the residential area pose a potential health risk for ingestion and dermal absorption of soil contaminants. Groundwater beneath the site is contaminated and would post a potential health risk * * *."

Other quotes from that study show that contamination was detected in the Carver Terrace subdivision. Soil sampling analyses revealed contamination of surface and subsurface soils.

Contamination was found in all areas of the site, concentrations—and all this is from the report—concentrations substantially higher than background were found for polynuclear aromatic hydrocarbons, pentachlorophenol, and other phenols.

The presence of these compounds in the soil and particularly subsurface soil can serve as a reservoir for future groundwater contamination. In addition, the presence of these compounds in surface soil makes it possible for contaminants to be transported by the wind or surface water runoff.

Contamination was also present in surface waters, sediments to the drainage ditch, the unnamed tributary next to it and gravel pits on the site.

PAHs and metal concentrations of background were detected in sedimentary samples. The presence of contamination in on-site surface waters may facilitate transport of contamination off site.

It goes on to conclude in that study, "High concentrations of PAHs were detected in surface soil samples from residential yards in parts of the subdivision. Small quantities of PAH-contaminated soil can be ingested by adults during outdoor work activities or by children during play * * *."

"There would be a significant health concern for frequent, long-term contact with the maximum soil concentrations of carcinogenic PAHs that were detected * * *."

It goes on to say, "Although some areas with high PAH concentrations were covered during remedial activities, other contaminated areas remain.

The remedial action level * * * in residential soil is not sufficiently protective of public health. The excess cancer risk associated with long-term exposure to soil containing this concentration of B (a) p (325 mg/kg), plus other PAHs with carcinogenic indicating and promoting activity poses a significant health risk."

Now, that report was filed less than a month before my letter from Region 6 said there is no significant health risk. And the EPA, I understand, in my letter to you of about two weeks ago I asked that we try to figure out some resolution to this.

The residents, of course, want to buy out. They believe that they have been living now for over 20 years on a Superfund site that is killing them. There are symptoms in the community there that are consistent with the presence of a high level of carcinogens.

There are illnesses there that presumably, at least in the community they think cannot be explained otherwise.

EPA, in determining that soil washing was the remedy, has delayed for almost a year, not for any fault of the EPA, but simply because in trying to get a lawyer to negotiation, as the law requires, negotiate with the guilty party, we have had two lawyers quit on us in Region 6.

And that has delayed those negotiations. There has been delay after delay. The people on the site, based on this health study, which although it wasn't hidden, no one knew about until about a month ago, believe that they are being exposed to an unusually high level of risk, that EPA has been aware of that risk, and that the only thing that will really work would be for EPA to buy out the site.

As I said, there are 79 residences there. I have asked repeatedly for that to be considered and have been told that that is not a reasonable alternative.

RESIDENTIAL BUYOUT

Really, my question is one that the proposed cleanup, as I understand, initially might cost $6 million or more. A buyout of the residences totally—it's a poor neighborhood, primarily minorities, in fact, totally minorities—the homes are probably worth $30,000 to $35,000 at the most each.

We would completely buy out that subdivision for $3 million or $4 million, totally buy them out. And then if we are going to wait two, three, five, eight, 10, 20 years, however long it takes to clean it up, my question, I guess from the standpoint of trying to protect public health and safety, could we buy out a subdivision like this, then do the cleanup whenever the study shows—and I know that is the goal, and that's what we ought to be doing?

And then perhaps when that is done and we have done a significant level of cleanup and we then have a subdivision that again could be used, we could sell these properties; EPA, the government, probably would cover the total cost of the buy out and protect 79 families that are sitting, living on what EPA says is a significant risk to their own health and which they sincerely believe.

And I guess I know that buyouts have been before in cases that I understand can be distinguished from Koppers, but from the standpoint of if it's our goal to protect public health, I guess, why can't we look at—and maybe my situation is not new, but I have 79 families out there that do not have the resources to move anywhere.

They are trapped. They are caught. They are caught in a bureaucracy and a plan; and in fact, EPA tomorrow night is coming out there for a public meeting in which they decided to say they have changed the cleanup plan.

They are going to have some kind of hearing out there in which they say they are going to redo or fine tune or something, and the residents are sitting there saying how much longer?

This was put on the Superfund site in 1984. It's been six years. And is there not some way that we could at least look at the possibility in this situation, particularly if we could make it over several years, budget neutral, that we could look at a potential buyout of these families and get them the heck off of a site that, according to the EPA, is killing them?

Mr. Reilly. Well, Mr. Chapman, I am familiar with some of this. I am not familiar with all of it. And I don't have any specific knowledge of the sequence of timing and the publication of the health study with the new and disturbing information, and then the reassuring letter that the citizens saw from our Regional Administrator. We will certainly look into that.

We have begun a new risk assessment back toward the end of last year and had considered going forward to make some changes in the record of decision on the final remedy for that site, had asked the responsible party to do a pilot study to determine what would be involved in excavating soils from around one home to get some fix on that.

Let me say that I will look into it, and with the significant concerns you have raised, and see whether in this instance there is a relocation possibility.

It has been done for other places. I don't know whether the fact situations are comparable or not, but I will take a close look at that, and we will get in further touch about it.

Mr. **Chapman**. I would really appreciate it if you would. And I think the buyout situation can be distinguished from ours. And I am not saying that there is precedent for my exact situation.

But there is, according to EPA, a significant health risk at this site. And if there is some way that we can be innovative or creative in some way, and I don't know how it would work, but that at least maybe over two or three years if we could lessen the economic, the budgetary impact of this.

In fact, we requested that a health study be conducted, and EPA has not even agreed to do that. This risk assessment, or this health assessment for the Koppers Company, Inc., April 10, 1989, we have not even gotten EPA to agree to go in and do a health study.

And it seems like at a very minimum—and I have got 79 families out there that are crying out for help. And I don't think anybody suggests it's not a long-term risk.

For example, one of them, I was accosted, if you will, in a Town Hall meeting in Texarkana in which shortly after I received a letter.

And in good faith, the Region 6 administrator came up and visited with me. I have no complaints about the responsiveness of EPA, but it just seems that perhaps it may be shortsighted.

Because some of the residents say, every time EPA comes out to check the site, they put on space suits and yet there is no risk. Every time they come they dress up like astronauts; and here these families out there saying you are the guys telling us there is no risk, take your space suits off. And they wouldn't do it.

And it's a—I mean you can imagine how these folks feel.

Mr. **Reilly**. Well, I have heard enough, Mr. Chapman. I will take this very seriously. We will look into relocation. We will see what can be done here.

Mr. **Chapman**. Try and see if there is something that we can do to try to quickly resolve this.

Mr. **Reilly**. Did you hear Mrs. Boggs' suggestion? A site visit without a space suit on the part of the Administrator.

Mr. **Chapman**. That would be great. I am not sure I would ask you to give it that kind of commitment. I don't think we should subject any additional folks to the problems.

The other thing is maintenance of the site. And quickly, let me say EPA has been responsive on this area, but apparently, according to Region 6, there has been no set policy about once after an area is designated a Superfund site, and in this one there are other ways in which tall grass has become a problem, and there are open pools that are contaminated, and a fear that if something caught on fire, airborne contaminants could be a problem.

Mr. **Reilly**. This is not for the Koppers site?

MAINTENANCE OF SUPERFUND SITES

Mr. **Chapman**. I moved about three blocks on you to another Superfund site. Is there any policy to your knowledge on maintenance? While you are trying to develop a cleanup plan, is there an EPA policy on maintenance of a Superfund site prior to cleanup?

Because we have had a terrible time with this site, just getting it mowed.

Mr. **Reilly**. Well, oh that issue. I think that we are prepared to make sure that the grass gets cut and that the risk is kept down of a fire, the kind of thing that we worry about. And we are negotiating with local people to assure the grass cutting gets done.

And we are prepared to continue that, either through the Water Commission or through the count on into the future, until we actually get an agreed upon remedy undertaken there.

Mr. **Reilly**. Does the problem go beyond that?

Mr. **Chapman**. Well, again, it's local perception, and let me explain as I understand what happened. They had a terrible time getting EPA to refine it or recognize maybe a fire hazard which could create an airborne pollution problem.

Once EPA finally said we will mow properly, then Region 6 said well, there are only certain kinds of people that can qualify to mow. You have to have been experienced in mowing Superfund sites, and you have to have a certain level of experience and so on with a rather small area. EPA ended up paying $10,000 to put a couple guys out there on a tractor with a bush hog to sled this place in their tennis shoes with no protection at all.

And so again, the people are saying on the one hand they show up three blocks away in space suits, and then they come over here saying we got to have all these protections, only a certain number of people will qualify to do this kind of cleanup, and then they show up with just a regular farm tractor with no protection at all and pay $10,000 to do it when the local would have done it for $1500.

Again, people are looking out there just saying what is the policy? What is the deal? And then, they only mowed around the water. They did not mow the entire site completely.

So that has been a concern. And I will get off my soapbox. But I wanted to just alert you to this. It's a major concern in an area and it seems that we are wandering around without a firm policy on something that has created a significant health risk.

We need your help.

Mr. **Reilly**. Fair enough. Those kinds of concerns are among the most distressing that somebody in my position can hear. We will certainly look into those sites and guarantee to keep the grass cut and also to put a clay cover over the lagoon and to see what else is possible, and perhaps look into that history and see whether it's suggestive of a change in policy.

Mr. **Chapman**. We are on time constraints here, and I don't mean to leave out anything from that standpoint. So to the extent that I may leave out an element or fact here or there, I have tried to represent it as best I can.

But I really do appreciate your help and assistance.

Mr. Chairman, I have got some other questions I will submit for the record; but let me defer to my colleague from Massachusetts.

Mr. **Traxler**. Mr. Atkins.

NATIONAL SLUDGE PRODUCTS EFFICIENCY ACT

Mr. ATKINS. Thank you, Mr. Chairman.

Last October, the Senate Subcommittee on Consumer Science held hearings on the National Plumbing Products Efficiency Act. EPA was asked at that time to comment, and you apparently were all set to submit what I believe were going to be very positive comments on the legislation before OMB stepped into the act.

You are familiar with them?

Mr. REILLY. Yes, sir.

Mr. ATKINS. After a six-month delay caused by the OMB intervention, you finally submitted comments, just a short time ago, which expressed strong support for the concept of water conservation, but which strongly rejected the concept of national standards.

And I am just curious, if you would, as to what the EPA position is and how much of it is guided by the discipline of OMB and to the extent that you are comfortable, would you explain whether that makes any sense?

Mr. REILLY. Well, first of all, I think that the goal of water conservation is one that EPA must be very sympathetic to, and very supportive of.

We find typically in the most difficult and controversial decisions we make, involve approving the development of a new municipal reservoir that would take some reasonably valuable wetland. We then have to look at alternatives and find ourselves making decisions on the basis of whether we conclude that there are alternatives to constructing a new development facility.

Typically there is the water conservation alternative. We find over and over again, that the impact on other resources which are extraordinarily important, natural systems, ecology, environment, forest, can be reduced quite a lot if there is effective conservation.

So we support conservation. We have recently begun, just within the last couple of days, a review of a very ambitious water conservation policy that the State of Georgia is developing.

We would support some aspects of the proposed laws that are currently being considered. We would support legislation, for example, to try to inform consumers about the conservation impacts of shower heads, and toilets, and faucets.

I think that over time, we are likely to see, and this certainly has been a pattern with respect to a lot of laws, that as different states select different standards and take different approaches to water conservation, the demand for standards will then come from the regulated industry.

But it does not at this time. There is a lot of concern about standards imposing any premature constraint on places that have very different situations in terms of the water available to them and the severity of a problem.

And for that reason, at this time, we are not prepared to say that we support them.

BOSTON HARBOR

Mr. ATKINS. Let me, if I could, move on to something else. I am not sure whether it's a local issue or a national issue; our favorite topic, Boston Harbor.

Mr. REILLY. Given that it gets raised all across the country, it's graduated.

Mr. ATKINS. By all kinds of people, and I will say that nobody has come out to Boston Harbor with a space suit on yet from EPA.

And I don't want to deal with the funding issues. You have expressed your position. I have expressed mine. And I am not sure anything will be furthered by going through that.

But I would like to deal with some of the EPA policies that I think are creating some additional hardships, not just in Boston Harbor, but generally with other people facing similar cleanups.

The first one relates to your sludge regulations. Last year at this hearing, we discussed your regulations, which you had just put out for comment at that time. They created disposal standards for sludge that were so stringent that they appeared to make recycling or reuse of sludge materials impossible.

Subsequent to the hearing, you went back, you reviewed those regulations, and I appreciate that. And EPA came out and said that the standards needed to be redone.

And at the heart of that was the problem of science that the standards were based on, and you made a decision not only to come up with new standards but also to redo the science.

And as a result of that, EPA has indicated that the standards wouldn't be available until the Fall of 1991.

And then we will have to go through a comment and an adoption period. In the meantime, Boston is under a court order to complete a sludge recycling facility and have it completed and on-line by December of 1991.

As a result, our water resources authority is forced to commit, $910 million to a sludge recycling facility, which theoretically, virtually two months after its finished, EPA regulations could come out and say that the facility doesn't meet its standards.

And I am just curious, and I am sure there are a number of other communities with a similar problem, what your feelings are about how we can resolve that.

I mean, in regard to the earlier comments about waste facility sites in Texas, I think oftentimes in the environmental areas, we do things that to the average citizen appear not to make a lot of sense. And building a facility to the best of our ability, spending $90 million and then having it shut down because it doesn't meet standards, I think that would be something that wouldn't be useful for any of us.

SLUDGE REGULATIONS

Mr. REILLY. Let me first say that we did take very seriously the comments you made and those of others last year about our sludge regulations. We went back in and reviewed them.

Mr. ATKINS. But not about the harbor funding.

Mr. REILLY. On the whole issue, I continue to get letters from members of my own family who live in and around Boston. It is one of the few issues on which my family has lobbied me.

And on the sludge issue I might say, with respect to all of them, apropos the timing problem that you have here. I'll ask LaJuana, to respond to what we can do about that?

Ms. **Wilcher**. Not a lot, except to try to make sure that the regulations that we do come out with are consistent with the best practices that are ongoing and are not too stringent.

I think some of the concerns that were raised previously were that our proposal appeared to be too stringent and that we wouldn't really be able practically to have beneficial use of the sludge.

We went ahead and instituted the National Sewage Sludge Survey to try to get more up-to-date, more accurate information, so that we do have that available.

We would like to work with you as you all are developing that facility to try and ensure that that doesn't happen. We will be more than happy to do that.

My expectation is that in the process of developing a new facility, you would have less problems in meeting the requirements than those that are already in existence that may have to change practices.

Mr. **Reilly**. But his concern is that they don't know what the requirements are.

Ms. **Wilcher**. Well, that is true, and because of the concerns that were raised about our previous science basis and our methodologies, we are having to take longer if we want to put out a good rule and one that is defensible.

And so the date has slipped because of the various concerns that we are raising here.

Mr. **Atkins**. It would seem to me that perhaps it might be a burden on the EPA either to issue some form of interim regulations, guidance that people could live with and have some certainty that if they met them, the facility would be approved. Or, if that is not possible, and that may very well not be possible, then to go back into court, since you are required to do this under a court order which is driven by EPA, to go back into the court and to change the time schedule for that portion.

It may be that you want to move some other portion out. But allow that portion to slide until we can be governed by your regulation.

It seems to me the one outcome that isn't tolerable for either of us is to spend $91 million on a facility and then slap up a regulation saying that it's in violation and cannot be opened.

Mr. **Reilly**. Well, nobody wants to see a million dollar investment go forward that turns out to be obsolete. And that is not something that I would want to be responsible for.

Let us sit down and look at the possibility of developing some interim guidance so that investment decisions are made with our involvement and implicitly enforced by us and conclude that problem.

SEDIMENT POLICY FOR SUPERFUND SITES

Mr. **Atkins**. I appreciate that, and I appreciate your responsiveness on the other sludge issues.

Another sludge related issue: EPA now has an admissible sediment policy for Superfund sites, and as a result of that policy, sewage agencies could be held financially responsible for Superfund cleanups if the sludge containing hazardous materials is discovered at contaminated land fills.

It seems to me that that policy flies in the face of logic, considering the fact that it's industrial discharges from another source that are going in through the sewage agency. What that policy will simply do is add enormous additional liability costs onto the sewage treatment agencies, who are already suffering from substantial reduction in Federal commitment on the construction grants. That would seem to be an area where with a change of policy, you could substantially alleviate costs for those facilities.

And I cannot see logically why they should be held to be liable.

Mr. **Reilly**. Don, do you want to comment on that?

Mr. **Clay**. Basically what our municipal policy says primarily addresses landfills. This is where we have had more problems with sites on the National Priorities List. Our current policy is that if a city just contributed household waste, we will not make them a potentially responsible party because of that contribution. We wouldn't go after them if that is all they do.

To the best of my knowledge, we were silent on sludge.

Mr. **Atkins**. But I think that there are ways and ways of being silent, and I think that the way the language is drafted, not only in Boston but in a number of other communities similarly affected, legal counsel has told the municipal treatment agencies that they have this liability.

And if it's not your intention to hold them liable for it, it would seem to me to be useful to change that regulation to give some kind of administrative guidance specifically stating that under those circumstances, they would not be liable?

Mr. **Clay**. We put that out as an interim policy, so if they comment, we would be happy to respond to it.

It was not put out as now and forever. We are still soliciting comments.

Mr. **Atkins**. We have comments.

Mr. **Clay**. We will address those comments as we go to the final regulation.

Mr. **Reilly**. It isn't clear to me why municipal sludge should present a significant hazardous waste problem. Obviously we worked very hard last year and tried to make sure that toxics are kept out of that waste stream.

And it may well be that the distinction that—well, we will certainly look into it. But between industrial waste and municipal waste, there may be a distinction there that will leave a liability in one case but not the other.

But we will review it.

Mr. **Atkins**. Just if I could quickly go through a few other points.

Mr. **Traxler**. I have a question on that, on this issue that you are now discussing.

Are you moving to another topic?

Mr. **Atkins**. I was moving to another topic, and I will be happy to yield.

Mr. **Traxler**. If you would be kind enough to give me a minute or two of your half hour.

Mr. **Atkins**. Have as much time as you want, Mr. Chairman.

POTENTIAL SUPERFUND SITES

Mr. **Traxler**. On this point of potential Superfund sites, all across the Nation, we have numerous municipal, for want of a better phrase, dump sites.

They aren't exactly sanitary landfills.

I was trying to understand your answer to one of Mr. Atkins' questions and that dealt with the responsibility to municipalities.

Could you just elaborate a bit on the point that you were making in response to his question about the municipalities and what you perceive as their liability for these potential Superfund sites?

Mr. **Clay**. What we are saying is that there is some percentage, like 15 to 20 percent of the sites on our National Priorities List that are, in fact, municipal dumps or whatever you want to call them.

What we have said is that if the city's contribution to a municipal dump had just been household waste, we would not typically go out after a city as a responsible party. We will go out after who was causing the problem.

If a city puts industrial waste in, we can go after them. Or as we go after the people that put industrial waste there, we haven't relieved them of the liability. The city can go back and sue the responsible party.

We will not go after the city. We will say that, as long as the city just puts in household waste, that is probably not the problem. We will go after the waste contributors instead.

Mr. **Traxler**. Let me ask a hypothetical question here so I understand your answer.

Let's take a site which was owned and operated by the municipality to which they ran their household waste and their trash pickup, and it was dumped there some years ago.

They probably burnt and covered and at the same time, industries in the area typically would use that as their disposal site, as well.

Perhaps one could write a script in which the industries are no longer liable. They were not in existence. They were sold and resold, bankrupt, dissolution, the articles of dissolution perhaps filed with the local state.

With that kind of a scenario, what is the role of the municipality as a responsible party in paying for the cleanup? Have you thought through those kinds of questions yet?

Mr. **Clay**. That one has never come up, per se, to the best of my recollection. We might take the idea if it was an abandoned site and not go after anybody.

It depends on what the problem was. If the problem came not from the municipality, I don't think it would be fair to pursue the municipality. If it came from the industrial contribution, we would probably not pursue the municipality.

Now, if the city condoned it, we would handle that on a case-by-case basis. But if there were no other viable responsible parties, only the city, we would have to look at that and see who contributed to the problem.

We try to be fair about that, but——

Mr. **Traxler**. My judgment is you are going to have numerous questions arise concerning your practices in this area because from my observation, just riding across America in years gone by, most municipalities have a commonly operated, pardon the expression, city dump.

Mr. **Clay**. But they don't all turn into Superfund sites unless you have something other than the city normally generates.

If someone else's generating problem waste, we will probably go back to those generating as opposed to the city itself.

Mr. **Traxler**. I am sure you would be able to find some responsible parties to participate in the cleanup, share the cost of cleanup. But I think if you are looking back 30 years ago, 25 years ago, trying to find out, given mergers, acquisitions, going out of business, it would be very challenging, very challenging.

Mr. **Clay**. One of our requested increases is for more people to go out and look for potentially responsible parties. We are now starting to hire civil investigators and making a much bigger effort to do that.

Mr. **Traxler**. I think the key is going to be what the responsibility for the municipalities are in these situations. So clearly, for many municipalities, you are looking at literally bankruptcy to pay for some of those site cleanups if they are held responsible.

Mr. **Clay**. We are aware of the balance, and as I say, our policy is not to go after them, typically. Then they can go see the municipality if they, in fact, find them responsible.

Mr. **Traxler**. Excuse me.

Thank you very much, Mr. Atkins. Please proceed.

BOSTON HARBOR

Mr. **Atkins**. Thank you for clarifying that, Mr. Chairman.

If I could move on to the issue of combined sewer overflows. In Boston, it's estimated that the cost to address the CSO problem is going to be $1.1 billion in order to reach any kind of goal of a swimable, fishable, campaignable, Boston Harbor. In addition, CSO's are not included in the EPA directed and court ordered cleanup plan.

And so the cleanup plan is $6.2 billion, the estimate, plus the 1.1 for the CSOs.

Boston is being forced, as part of the cleanup plan, to construct a two-and-a-half billion dollar secondary treatment plant, even though, as I am sure you are aware, there is presently a National Academy of Sciences Study ongoing on what impact secondary treatment would have on the harbor and on other urban harbors.

Also, there seems to be a preponderance of scientific evidence and scientific opinion that in that kind of urban harbor with that kind of tidal flow, that the secondary treatment would add very, very minimally to the health of the harbor.

Obviously, the NAS should come in with better estimates of that. But given that, it would seem to me that if we don't correct the CSO problems, what we will have is a situation where we have secondary treatment, which will cost two-and-a-half billion dollars, and then every time there is a rain storm, we will have raw sewage flowing directly into the harbor.

And without getting into the question of whether secondary treatment is necessary or not, it just seems to me that logic would dictate that it would make sense to address the combined sewer overflow first, which everybody recognizes is absolutely necessary, which will prevent raw sewage from going into the harbor.

And then as we have concensus in the scientific community about the necessity of secondary treatment, and whether we want to do that, to take that issue up second.

Is that something that you would be open to? Presently the court order and the EPA position is forcing Boston to expend all of its resources on secondary treatment, and that basically leaves nothing for the CSOs.

Mr. Reilly. Well, I would say a couple of things in response to that question, Mr. Atkins.

First of all, the CSO problem is a serious one that confronts any number of jurisdictions around the United States with very large cost.

We are aware of that, and have worked with a number of jurisdictions to try to identify the extent of illegal hookups, and to enforce against that is to look to them for storage possibilities to do some kind of containment ponds, and then use intermittent release to prevent the large surge of storm water that then falls.

We have seen a number of jurisdictions, Chicago is a good example, make very substantial investments to simply try to resolve the problem by storing huge amounts of water.

However, resources for dealing with CSO problems are beyond what is reasonably likely to be in any Federal program for some time to come.

We have put together an environmental finance board at the Agency with a good collection of municipal controllers and financial experts and financiers and other officials to try to get a fix on various choices that are open within the constraints of this budget situation.

Now, on the subject of our attitude toward the deferral of any investments in secondary treatment, I have to say that given the history of the various large investments that our program has overseen, and those other jurisdictions have undertaken, it's very difficult for me to imagine that we would look favorably on the reconsideration of that strategy, absent some new information that we don't now have.

NATIONAL ACADEMY OF SCIENCES

We are working with the National Academy of Sciences to get that study underway. We expect to see very shortly their work plan, and grant application.

But I suspect that secondary treatment is going to be in the future of Boston Harbor's cleanup, absent some very different information from the kind we have seen thus far.

Mr. Atkins. It would seem to me——

Mr. Reilly. Let me invite Ms. Wilcher to add to my comments.

Ms. Wilcher. You said it just perfectly. I really don't think that I could add much to that.

It's a difficult problem. Until or unless we get something different from the NAS than our scientists have seen before, under the law, we really are required to have municipalities come into compliance with secondary standards. So right now we wouldn't be in a position to try to renegotiate the consent decree that has you all pushing forward in Boston.

Mr. **Atkins**. Nobody is suggesting that you reconsider your position on secondary treatment. However, even if we get the full amount that is authorized for Boston Harbor, it's less than 3 percent of the cost of the project.

We are accepting the fact that we are going to bear the lion's share of the cost. It's not a fight over the cost, but simply two separate things.

One is delivering marginal improvement in the quality of the water.

The other is directly delivering raw sewage into the harbor, and logic would dictate that as a timing schedule, even though you are committed to doing both, that you would get rid of the raw sewage first and then do the upgrade of the effluent that is going out.

And that effluent will actually be going out. It's the largest sewer pipe in the world. It will be going out nine miles into the Atlantic Ocean.

So it's clear in terms of the damage, and spending that kind of money, six-and-a-half billion dollars, and still having raw sewage flow into the harbor, it seems to me to create the kind of space suit effect that Mr. Chapman was referring to earlier, that people just wonder sort of what we are doing, all of us.

Ms. **Wilcher**. I have one other thought in terms of that balance.

I really am sympathetic to what you are saying. The CSO problems in Boston, as I understand them, generally are just wet water flows. As a result you are going to have problems there when you have large rainfall events.

However, the problem of not having secondary treatment now means that contaminants are flowing into the Harbor day after day after day. I think that is one reason that we would be reluctant to switch the order of trying to come under compliance there.

CSO CONTROL POLICY

Mr. **Atkins**. The bulk of the flow is wet water, but there are not continuous flows into the harbor.

Let me just ask one final question on your new CSO control policy. You are requiring that, if they are directed into the treatment plant, the wet water overflows be treated with secondary treatment, which in Boston will add a cost of $250 million to the secondary treatment plant.

And since our wet water flows are far, far cleaner than normal waste water flows, it would seem to me that there ought to be a question of whether they are to be treated with secondary treatment, particularly given the cost and given the other requirements and the issues that you are raising in terms of the number of things we need to do and the lack of available resources.

Are you prepared to reconsider that issue of secondary treatment for the CSO flows?

Mr. REILLY. I think the surprising thing to me about CSO runoff is that it's as dirty as it is. It's not pure rain water. I mean, it's typically got all sorts of contaminants so that, water running off city streets, whether it's oil and petroleum related chemicals, in some cases chloroform.

I can recall that as being a big issue in some major cities, particularly before they put in the dog control laws, so that that does create the need, sort of a counter intuitive need, to treat the storm water very much like the water that is going into the waste water treatment plant.

I am not specifically familiar with the Boston CSO water, but would be surprised if it doesn't have those characteristics.

Mr. ATKINS. But you are now in a position where essentially what the publicly owned sewage plants could do would simply choke up the flow upstream, which would just divert them probably into more sensitive water than from the outflow pipes.

But I would hope that you would reconsider that policy, because I am afraid that is going to be the net effect.

Thank you very much for your patience, Mr. Chairman.

Mr. TRAXLER. You are welcome.

ENVIRONMENTAL PRESIDENT

Before we conclude for lunch, here is the million dollar question. In your conversations with the President, and considering his desire to be the environmental President, could you be so bold as to suggest if there is an opportunity, as we wind down on our defense expenditures, to not only begin to reduce our deficit but in addition to that, to begin to address some very, very serious questions on the environment?

It would seem to me that a strong commitment to issues that were just raised a few minutes ago, the whole issue of CSO and even treatment of the surface runoff, multi-billions of dollars on a national basis, if that were addressed by your agency and by the Federal Government in a long-term program in which we have assurances of doing annual consistent dollar funding, it would mean tremendous amounts of expenditures for cement, for steel, earth moving equipment, decent jobs, in the very areas that the President has many concerns over employment opportunities, it would leave our environment better than what we all found it.

And it would improve the lives of millions of Americans. Some people would classify that as sort of a public works program.

But we are now fessing up that the military expenditures basically are jobs programs for limited portions of this Nation, specific targeted areas of this country, and environmental effort of this nature would be beneficial to the entire Nation with every sector of the country and every hamlet in a sense benefiting from it and I think would earn him the eternal gratitude of the people of this country and perhaps, if good government is good politics, could be the cornerstone for his reelection.

Well, that's just luncheon conversation. So we will adjourn for lunch.

Mr. **Reilly**. Thank you, Mr. Chairman.

[Recess.]

RISK ASSESSMENT

Mr. **Traxler**. All right. We talked last year about the importance of ranking EPA's activities on the bases of "risk assessment." The issue is, you are to assign the highest level of resources to the highest environmental risk, and the question is, are you doing that?

Now, for instance, a 1987 EPA report found that the greatest risks were not given the highest budget priorities, and according to the publication "Inside EPA," your Science Advisory Board said in January of 1990 that you haven't as yet allocated your highest budget priorities to what are perceived to be some of the higher risks.

First, is your January 1990 report available yet?

SCIENCE ADVISORY BOARD REPORT

Mr. **Reilly**. Is this the Scientific Advisory Board?

Mr. **Traxler**. Yes.

Mr. **Reilly**. The Science Advisory Board report is due out this summer.

Mr. **Traxler**. It will be published this summer?

Mr. **Reilly**. Yes.

Mr. **Traxler**. What do you think their conclusions are going to be? Are they going to tell you that you are not putting your dollars where the greatest risks are?

Mr. **Reilly**. Well, this is an exercise built on an earlier report that was released in 1987, the Unfinished Business report. It was an effort to be objective on the part of the professionals of the Agency in applying their best judgment to where in society these serious risks were that we are responsible for addressing. The report simply ranks the risks according to long-term/short-term risks, and according to risks to ecology and to health. It tries to do nothing particularly scientific beyond giving expression to their judgments, based on their experience.

The Science Advisory Board is going to build on that to some degree; their report will perhaps be a little bit more scientific and structured, and I expect it will be very sophisticated. I don't know what it is going to say; I have not had advanced exposure to it yet. But I would only say that I think that from our point of view, and from the society's, these efforts are extremely valuable to inform the debate at a time when we are allocating significantly more resources as a society to environmental protection.

We will probably not see the budget of the Agency conform in any quick or short time period to the hierarchy that may be indicated for a variety of reasons, the simplest of which is that we continue to administer statutes according to a different calculus of priorities. I would expect, though, over time we will enter into a dialogue based on the information that the Science Advisory Board makes available to us that perhaps will line up more closely the risks with the outlays of the Agency.

I won't expect, in other words, that we will immediately come back and say, well, as a consequence of this report and our essential agreement with it, we want to reverse a number of budget decisions or change some statutory priorities that we have been working with.

Over time, however, to the extent that the public and the Congress begin to share this perception of risk, that is the direction I assume we would go in.

Mr. **Traxler**. Well, the good Lord willing, next year we are going to ask you to rank your risk assessment, one through whatever you need, and we are also going to ask you to tell us how much money you think is necessary on an annual basis to address those concerns, it is sort of "to be continued."

Mr. **Reilly**. Let me alert you to something else while we are discussing this. We are, entirely apart from that exercise, attempting to calculate the cost that will be imposed on society as a consequence of existing laws that we already administer, or that we can anticipate, like the Clean Air Act reauthorization.

I have some sense that this study will show, that the curve of cost will go steadily upward, not of the Agency necessarily, but of the society. It will simply provide one more reason for taking seriously the views of the Science Advisory Board as they try to give some hierarchy, some sense of priority with respect to risk.

Completion of that report is probably closer to the fall. We will share that with you as well, so that we look at the two issues together.

SUPERFUND INVESTIGATIONS

Mr. **Traxler**. Well, we are going to try and help you align those risks and your monetary expenditures. We talked a little earlier today about Superfund, and last year we devoted quite a bit of time to it, and there have been a series of investigations going back several years, including some by this committee, and again we talked about that last year. Those investigations and reports all came to the same conclusion at that time, that Superfund was just not working properly.

Everyone seemed to agree we were spending a disproportionate level of dollars on site evaluations, lawyers, all kinds of technical things, and personnel costs that some people argued were questionable; and we note that you rightfully and to your credit implemented a 90-day review of the program.

What did your review tell you?

Mr. **Reilly**. Well, the review tells us first of all that we have got to give clearer signals to the regulated community, to responsible parties, to our own people, to everybody involved, to what our intentions are.

The first of those was reflected in the enforcement first priority, that we will, and we have, proposed to move people out of other areas of the program to engage in strengthening our investigations, ensuring that the evidentiary material we have is stronger, and that we are better able and can pursue more aggressively those people who ought to contribute to cleanups.

I think that is the first lesson from that experience. The second is that, and this relates to our previous conversations, that the cost—that a variety of expectations that underlie the early thoughts about that program have not been borne out. That is, the program has been conceived of as a relatively discrete program, that addresses a limited number of sites in a relatively short time period, not being so extensive as it has been, and I think we are now prepared to see this program go on for some time to come.

We have experienced very high average site cleanup costs; we are going to be adding more sites to the National Priorities List. It will be with us for some time to come, in other words. It is after all a hazardous waste cleanup problem, the consequence of many years of past behavior and practice.

SUPERFUND ENFORCEMENT

Mr. **Traxler**. Some of the difficulty with the enforcement of the law is the fact that Congress, in great detail, spelled out the administration step-by-step procedures. Are you finding in the adminstration of the act that those are cumbersome, that those kinds of detailed instructions in a sense frustrate what one might call more efficient administration of the act?

Mr. **Reilly**. Well, it is a very fair question, and there are some strong opinions held on it. I decided early on that given the history of the Act and the completeness of the program, that our effort, until reauthorization, would be directed at one thing and one thing only, and that is making a success of the statute that we have.

I have tried to communicate that to the public, to concerned people who live around the sites, and certainly to our own staff. Certainly the transaction costs have been very high, certainly the cost related to litigation has been very high. That characteristic is broader than just Superfund; that affects so many of our programs.

But for now, I am not prepared to criticize the law. I think the numbers suggest that we are doing a better job of administering it, and I want to make the best case for that in the time that we have leading up to the reauthorization.

IMPEDIMENTS TO OPERATION OF SUPERFUND PROGRAM

Mr. **Traxler**. What do you think is the principal impediment to an efficient operation of the Superfund program? If you had one thing that you would change, what would that be?

Mr. **Reilly**. That is a good question.

Mr. **Traxler**. You can give us two.

Mr. **Reilly**. Let me ask a nonlawyer who knows more about it than I do. Don Clay, what would your answer to that question be?

Mr. **Traxler**. You never thought you would get a chance to verbalize that kind of opportunity.

Mr. **Clay**. If I had my choice, I would change the law of physics for groundwater and make it easier to clean up; that is our biggest frustration, that we are not able to clean up the groundwater as well as we had hoped. I think in terms of the law itself, there are conflicts; you want to respond quickly; be innovative; develop a permanent remedy; involve the community; and all sorts of other things.

But I think Mr. Reilly is right. I think we are doing that now, so I am not sure I would change that much in the reauthorization. If I could change one thing I would change the expectations of how you judge success, and which could be changed, and it is not just from removing sites from the list, it is all the other work we do too that removes risk, and so I would change that, if I can't change the law of physics.

Mr. **Reilly**. We were just discussing this over lunch, increasingly learning from our laboratory people about the limitation of various technologies, in particular technologies that have been the mainstay of the program; and the need for new technologies to do a more effective cleanup job and to bring the cost of cleanup down. That is the other major priority I would signal that came out of that management review.

CLEANUP TECHNOLOGIES

Mr. **Traxler**. That goes to my next question, basically the perception is, on this subcommittee, that the cleanup technologies are lacking, they are very expensive and we lag behind the Europeans in this regard. Ten to 15 percent of your sites do present a health risk; the others don't.

Can you prioritize and move towards cleaning-up those which do present a health risk, and monitor the rest. Try to find permanent remedies that largely deal with the problem on-site. A lot of us have the sense that what we are doing is taking contaminant from one hole and putting it into another hole, an improved hole, but at the same time we are basically earth movers.

Our concerns are that we are spending horrendous sums of money testing the earth and the toxics or the chemicals or whatever happens to be in that particular site, moving it after considerable adversarial discussions, including lawsuits, and moving it to another hole. Our objection is that the Europeans are a little more successful in some respects than we are in the technology fields, and that we ought to be looking at some of the things they do.

What is your sense in that regard?

Mr. **Reilly**. Well, I am not sure whether they are more successful in cleaning up waste facilities then we are. They are certainly less ambitious in terms of their cleanup expectations. Perhaps a better way to say that is that they are more prepared to redevelop a site, resettle it, plan for habitation on it after they have engaged in a cleanup exercise that many perhaps here would find not quite sufficient, not perfect.

The effort to try to identify the worst sites physically and the ones that pose risks and move on them fastest is, in fact, an emphasis in the management review; the "worst first" approach has resulted in hundreds of removals, and we have tried to take action at some of those sites more rapidly than at others.

I think, on balance, it would be very helpful to us if we could, both for our own management plans and also to reassure the public that the expenditure of all of these funds has in fact been productive, if we could create another category of National Priorities List site that is essentially different. I think you used the word "maintenance or observation" site where we have done virtually all the cleanup we are going to do, and we are reasonably confident, but not absolutely certain, that it will be sufficient and effective.

But we have to monitor that site for some time to make sure that we can remove from the priority list. It is nothing more at that point than a site that is maintained for purposes of making sure the cancer is cured.

We didn't do that last year; we thought that perhaps it would be more than people would be willing to accept from us. But I would appreciate encouragement to go ahead and develop that new approach in the future. I think it would be helpful.

COST-EFFECTIVE TECHNOLOGIES

Mr. **Traxler**. Well, suppose if there was a consensus and support in the Congress in 1991 that would see us one, expand the emergency removals, which has been a successful program.

Mr. **Reilly**. One that virtually nobody recognizes, however, as you know.

Mr. **Traxler**. It is unfortunate. Two, we would limit the cleanups to the real health hazard sites, or those that have the potential for human health hazards, and three, we would pump additional money into research and development. Looking for improved and cost-effective technologies to use in site work. What would you think of that scenario?

Mr. **Reilly**. Well, I would be very sympathetic to the third priority right off. The only question I would raise with respect to the others, is I think we would have to be careful not to take sites that—to which we have already made substantial contributions by way of RIFs, preparations, put them in the stream, begun to go forward with contracts and the rest, irrespective of where they came out on the new ranking system, so as not to disrupt the progress that is under way.

But that concern met, I think I would want to take a closer look at it, and would have a lot of sympathy for taking that kind of an approach.

CONSTRUCTION GRANTS REDUCTION

Mr. **Traxler**. The administration is proposing to cut the construction grants sewage treatment program by some $400 million to $1.6 billion. Does that have your support?

Mr. **Reilly**. Well, we obviously have a lot of priorities that we are working with, and are trying to allocate funds in a way that meets our most urgent needs first. As you know, we have laid out some $50 billion at the Federal level on waste water treatment construction grants over the years. The need dwarfs even that number, as we have documented.

We are not likely to have the sources to make a serious dent in the remaining problem that the states have, and bearing in mind what I said earlier about the vital necessity of attending to our core program needs, I would have to say that I don't disagree with that priority.

Mr. **Traxler**. But you wouldn't be unhappy if we restored the $400 million, would you?

Mr. **Reilly**. I would certainly want to see what it was at the expense of.

Mr. **Traxler**. It would be at our agency's expense.

Mr. **Reilly**. Sounding better all the time.

Mr. **Traxler**. I thought we could entice you, said the spider to the fly.

Mr. **Green**. Mr. Chairman.

Mr. **Traxler**. Yes, sir, Mr. Green?

REVOLVING FUNDS

Mr. **Green**. How comfortable are we that as we move to the revolving funds, that it is going to have the resources. In other words, how long do you think we are going to have to keep building up a revolving fund before it truly revolves?

Mr. **Reilly**. Well, that is a good question, and I am mindful when I answer these questions of the very strong feelings of the governors on some of these issues.

LaJuana, do you have any specific guidance on that?

Mr. **Traxler**. Not only that, but we will remind you of your answer in the following year. Excuse me.

Ms. **Wilcher**. Well, in the time I have been there, we do know that the needs are going to far outstretch what the Federal Government has projected, or can probably afford to pay. Even our assessments of the next 20 years show that the needs of municipalities to meet secondary treatment standards are far exceeding what we can help them with.

But we think the state revolving fund is a good process to do that. We think the level of funding, the money that we are putting in for the phasedown approach will give us about $22 billion that will be revolving around at some point in time. By the time the states match what the Federal Government is putting in, by the time that interest payments are being repaid, we think that there will be a substantial amount of money there. But I guess——

Mr. **Green**. How many years does it take?

Ms. **Wilcher**. I think over 20 years. To be real honest, I guess as I have looked at it, I used to represent municipalities in private practice, and so I am pretty sensitive to the problems they are having. One of the things that we may just have to recognize is that we in the U.S. have had lots of clean, cheap water and we have had our wastewater treated at a reasonably low cost per household, sometimes between a half a percent per household and 1½ percent per household. That is far below what we pay for telephone bills and for other kinds of utility bills.

So I guess, where I see it is going is that we are all going to share the cost, the Federal Government picking up what it can, the states picking up more, local governments picking up some. I think over the next few years, the American public may have to move along in the direction that for safe drinking water and for municipal wastewater treatments, those expenses are probably going to have to go up a little bit per household basis.

So I don't think there is one answer. I don't necessarily think the Federal Government can provide the answer.

Mr. **Traxler**. Well, it depends on your priorities, really.

Ms. **Wilcher**. Yes, sir.

WASTE WATER TREATMENT COSTS

Mr. **Traxler**. I mean if you think for instance what the Germans are doing now by way of wastewater treatment and now they have a multiyear program, which is going to cost them billions of dollars over the next 20 years with a strong national commitment to do this, while we fiddle around looking at the plans, at a cost of half a trillion over a multiyear program, I mean it certainly depends on priorities. It isn't whether we have the money, it is where we spend the money.

Forgive me for lecturing you, but there are alternatives, and simply to say that we can't afford to do this because we don't have the money, that isn't the answer. The answer is, in our list of priorities, we choose not to do this, we are going to spend it on other areas.

Mr. **Grizzle**. I think it is safe to say, as the authorization in 1994 expires for Federal contributions to the construction grants, the states are going to continue to suggest that it needs to be extended.

Mr. **Traxler**. And of course in today's budget constraints, how successful can the authorizing committees be in renewing the program or enlarging the program. So once again, if you contrive deficits and worship them for defeating the social programs, of course you feel like a victor and you leave the nation in much worse shape than when you came into this world. How you lead the nation isn't important to some people.

Mr. **Reilly**. I would point out that though the amount we are requesting here is $400 million, down from last year's appropriated level, it is $400 million up from what we requested a year ago, so we have each moved in a different direction.

Mr. **Traxler**. Exactly. It is how you look at the bottle.

Mr. **Reilly**. Let me also refer to this environmental financing board that we have established. This is something new in the Agency; it is something to which we attach a lot of hope. I hope eventually it will become for the financing field what the Science Advisory Board has been.

When it has great stature—and I expect that they will inject a good bit of creativity and perhaps energy into this whole question, because they are looking at it from not just the point of Federal financing, but of State and local needs as well, and we hope to have the benefit of some of what they do before too long.

Mr. **Traxler**. As long as we are talking philosophy for a moment, I have a sense that it is this kind of an infrastructure program. First, the nation needs it.

Second, I think in the context of the evolving world situation and the opportunities for us to redirect monies that were otherwise spent in the defense area, while many people wouldn't want to see that totally directed toward deficit reduction, that would probably have a severe impact on our economy; and at the same time, it would seem that some of the monies committed to the development of our environmental infrastructure, pay very handsome dividends down the road and truly allow a person to make the claim "I am an environmentalist."

The principle on all of that is what it does to industries, steel, concrete, the good jobs that are provided, as I told you this morning, it just seems that if we were to lay out a multiyear plan, based on environmental expenditures, it would be extremely beneficial to our municipalities, to the suburbs, even the small towns in rural America.

It would have universal appeal. I think the politics to it are so commanding, and the only people who are irritated are the right wing, and they are irritated all the time anyhow. I mean, they will never be satisfied until the government collapses and goes away, the perfect happy world of no taxes.

NONPOINT SOURCE AREAS

Mr. **Reilly**. Let me add one other point to this. In the course of preparing for the Earth Day celebration, we took careful stock of the progress the country has made with respect to the environment, and one continues to come up against the fact that in the water area, the progress is less, significantly less then it is in the air area. We have held our own, and that is not insignificant, because it is in the face of some 70 percent increase in gross national product.

But when you look at the condition of the lakes, the surface waters that have not shown progress, you find that a very large reason for that is the failure to address the nonpoint source problem. In other words, the construction grant program doesn't address what is now, as I recall, something like 65 percent of the surface water problem in the lakes, more than half the problem in rivers; certainly the Potomac, that has been true.

So in looking for creative ways to improve our waters Nationwide, we need to be looking at the nonpoint source area has had a wholly——

Mr. **Traxler**. That could entail expenditures for construction outlay money. But significant contributors to that type of pollution, are frankly persons such as myself who love their green grass and all the chemicals that I put on my lawn, both toxic as well as fertilizer, and the consequences that that has for nonpoint source, as it goes down the drain as you suggested earlier, and into the stream, the river, and the lakes or the ocean.

But, the point of the matter is, there is still opportunity there to do an immense amount of good. If you are talking about farm runoff, the opportunity to design structures and to build structures, the need in many instances, even if you separate yourself, there is still the need to treat in some fashion, as you indicated, the surface soil. Wonderful opportunities to improve the environment, and to do wonderful other things for society as well.

Again, looking at the construction grant program, what is your current estimate of the unmet sewage construction grant needs from the Nation? I think the total last year was about $80 billion.

Mr. **Reilly**. I believe that is correct.

Ms. **Wilcher**. Yes.

Mr. **Traxler**. You like that figure.

Ms. **Wilcher**. The needs survey is done every two years, so we are sticking with that estimate until our next report is done.

Mr. **Traxler**. Okay. How important you don't have to rank it one, two, three, but in a risk assessment where would you place construction and sewage treatment plants? In your judgment is it a high priority, middle priority, low priority, no priority?

Ms. **Wilcher**. Well, based on the information that we are getting, considering the sources of degradation of our streams, I think the nonpoint source and toxics areas are two of our highest. Among municipalities and the aid that we can give them, I think you have hit upon the area where I see the greatest need, and that is for combined sewer overflows. That is an area that the Agency had not addressed seriously until the court said you should address it seriously, so we are beginning to look at what we really do there.

Mr. **Traxler**. It would be an immense public works program.

Ms. **Wilcher**. Well, we are trying to do what we can to come up with the least expensive method, having diversion, having holding basins and things of that sort. We are trying to do the most we can afford, in the most economical fashion. However, those would be areas where I would say you would have the greatest risk, sure, are free-flowing streams.

Mr. **Reilly**. Mr. Chairman, could I invite Terry Davies to comment on that?

Mr. **Traxler**. Terry, we like volunteers.

Mr. **Davies**. Well, I just wanted to make an additional point, because I think the question that you posed in terms of waste treatment plants and where that would rank in terms of relative risk or the kind of risk analysis in the Unfinished Business report, one of the dilemmas and one of the reasons that you don't get a correlation between a list of risk problems in priority order and a list of budget expenditures or budget requests in priority order.

In something like water pollution or waste treatment plants, if we were not spending the money that we are currently spending in the base on building waste treatment plants or maintaining the ones we have, then presumably we would eventually reach a situation like in an LDC where water pollution is a major problem and would be very high on the risk list.

It is very low now, given that we have built the plants and we are continuing to operate them. So you have got to sort of make a distinction between the capital that is sunk and in the base and new expenditures which should have a somewhat closer correlation with risk ratings.

GLOBAL WARMING

Mr. **Traxler**. Thank you. Turning to global warming, the "Detroit News" recently had an editorial on global warming. It is rather interesting, and I want to give you some quotes out of it, and ask for your thoughts on it.

For instance, they say, "In 1980, the Environmental Protection Agency predicted an 'aquatic silent spring' across the nation. But a $600 million, ten-year study of the subject by the National Acid Precipitation Assessment Project, NAPAP, reportedly has found only minor damage to the forest, no damage to human health, and acidification of only 2 percent of U.S. lakes, nearly 70 of which have been acidic from preindustrial times from natural resources."

What is your comment on that editorial?

Mr. **Reilly**. Well, I think it takes a number of things wholly out of context and attaches a much lower significance to others that, I think, matter quite a lot. The NAPAP study is in my view a well-conceived, obviously very expensive and ambitious exercise; it has involved some of the best people in the institutions, and represents, as Senator Moynihan likes to point out, probably one of the most well-considered research areas of public policy—of research on a public policy prior to taking policy consequences that we may have ever seen.

It does conclude that visibility is significantly impaired in the Northeast as a result of sulfates. It does conclude that property damage effects on monuments and granitic stone is significant, and does conclude that effects on red spruce and upper elevation forests is significant; it does conclude that the nutrients in soils have been stripped away in many places as a result of acidic deposition with consequences for the future that can only be surmised, suggesting a kind of cumulative loss of resiliency on the part of the ecosystem.

There is not much doubt that the impact in the Adirondacks extends to hundreds of lakes that have been rendered acid, and even outside of that, in the Appalachians, there is more to come. I think by the most conservative current calculation of streams affected, it is in the range of 3,000 in the United States. The Canadian Ambassador refers frequently to 17,000 lakes in Canada that have been adversely affected by the acid deposition.

We have certainly impacts in the thousands in the United States, with the prospect for further adverse affects as this problem goes on unabated. The President said in 1988, "The time for study alone is over now, now is the time for action." Nothing in the NAPAP report, nor in the testimony by its director, Dr. Mahoney, in any way suggests that the Administration's initiative on acid rain, ambitious and extensive as it is, will not result in improvements over time in the ecology, in the visibility, in the protection of property, and I think finally in the lives of some people now affected by acid deposition.

I would just invite Bill Rosenberg, who was at the recent report of the NAPAP study.

Mr. **Rosenberg**. It was never charged, never considered, never spent a penny on health questions, so they didn't make any findings, but they didn't study it.

Mr. **Bretthauer**. I was going to point out that our Science Advisory Board has recently recommended to the Agency that we consider acid aerosols as a criteria air pollutant. Certainly the positive effect of controlling sulfur dioxide has immediate impacts on acid aerosol concentrations that we all are exposed to.

Also, it should be pointed out that although only a few lakes may be affected at the present time, that 20 percent of the lakes in the Northeast had a very low buffering capacity, and therefore could be significantly affected in the future at current emission levels.

ACIDIC LAKES

Mr. **Traxler**. I would like you to look at this paragraph from the report under "Lakes," and would you assist me with that first sentence, please? Because as a nonscientist I am not sure I understand the hieroglyphics there. Can you translate that for me?

Mr. **Bretthauer**. "Acidic lakes were a relatively small percentage of the targeted population, an estimated 4.2 percent were currently acidic."

Mr. **Traxler**. I guess I didn't understand the percentage because the symbols that are involved in that sentence, what do they represent? Is that the statisticians' fingerprints, if you know?

Mr. **Bretthauer**. I am not sure.

Mr. **Traxler**. Good. Now I feel more comfortable. Now I am a little nervous about the Agency. [Laughter.]

Do you want to take a crack at this, Bill? This is your chance.

Mr. **Reilly**. I see what your problem is. Well, the thing that is curious about some of the parts that have been lifted from this report is that they assign so little value to what—in fact, there are hundreds, if not thousands of lakes that they admit have been rendered acidic and lifeless as a consequences of acid deposition. This is referring to 4.2 percent, but 4.2 percent is I would have thought a reasonably significant number that already are affected.

Mr. **Traxler**. Just for the record, the sentence reads, "Acidic lakes were a relatively small percentage of the NSWS target population. An estimated 4.2 percent of the NSWS lakes * * *" and then parenthesis, N with a loop over it equals 1181, end of parentheses, and we are trying to understand what that means. I think that has to do with the sample size. And then—well, never mind.

Thank you. Stop there. Never having taken statistics, I feel very safe.

Mr. **Reilly**. And reassured about the Agency. I just would say that we are very confident of the legislative initiative that we have proposed. Obviously it will not reverse 40 years of acidic deposition in a year or two or five, but Dr. Mahoney testified to the affect that over time we would see benefits for these lakes and streams and for the ecological systems that have been impaired, we will see them in the United States, and perhaps as much to the point, we will see them in Canada where the numbers are even higher than they are here.

Mr. **Traxler**. Again, we are looking at this from our risk assessment standpoint, we are trying to get some priorities as to where we need to be spending our money. If one were to read the editorial perhaps and believe it, one would be led to the conclusion that the question of acid rain and clean air as it relates to acid rain would probably have a lower risk assessment than other concerns such as Superfund or nonpoint source pollution efforts.

Mr. **Reilly**. I would be reluctant to say that it would have a lower risk associated with it than hazardous waste, because the pervasiveness of polluted air, and of these acid aerosols about which health questions have now been raised, would make me very careful about, cautious about that. It may well have a lower risk than, well, than radon, indoor air pollution, but I would imagine that based on the evolution of information that is coming to us, the risk associated with acid aerosols particularly, with the acid deposition in general is likely to increase, especially if you include risk to the ecology as well as to the health.

Mr. **Traxler**. I would take it then that from your understanding of the summary documents in the study, that the editorial position of the study indicates that there is next to no threat from acid rain to human beings, or generally to the environment, is that a fair statement.

Mr. **Rosenberg**. I would also add to this that there are a lot of ecological questions. For example, visibility matters relating to Grand Canyon are caused entirely by acid aerosols, resulting from SO2 emissions. We took some action this year to deal with that; 30 to 40 percent of the visibility impairment in the Northeast is attributable to these acid aerosols. So it is, I think this question of environmental degradation. There is no doubt that we believe that it is a serious problem, and——

ACID RAIN

Mr. **Traxler**. Well, here is my question. Let's see if we can get specifically to it; $600 million bucks in ten years and for ten years we have been sitting here waiting for the answer, and the question is when we got through with the $600 million study, and we don't do too many of those, what did it tell us? Should we be concerned about acid rain, or shouldn't we?

Mr. **Reilly**. In my view, the study does nothing to detract from the assessment that we have a very serious ecological and a potential health problem associated with acid rain. The more disturbing implication of the study, though, is how long it is going to take for us to get significant measurable benefits from the major investments we are going to make. With the exception of visibility improvement in those acid aerosols, which should decline relatively rapidly, it is going to take a long time to bring those ecosystems back, tens of years.

That I suppose is a further reminder that when these very large disturbances as a result of pollution activity take place over a long period of time, they will take as long or longer to correct. That I found more disconcerting than any of the assessments of the problem.

Mr. **Traxler**. Well, has the study over the years definitively established what the threat may or may not be from the phenomenon we refer to as acid rain?

Mr. **Reilly**. Definitively established—it has characterized in a much more precise and specific way, and has in fact laid to rest some of the assumptions that they made earlier about the causes and effects of acidic deposition. It had been thought, for example, that the contribution to forest decline from sulfur dioxide was much higher than currently appears to be true.

So in that sense, there are any number of issues you can look at in sequence in the report and say well, that is larger than we realized, that is smaller, and in some cases, as Mr. Rosenberg mentioned, they didn't study things that are looming larger now to us than they were 10 years ago, such as health effects.

I don't know if the study is very definitive, but I think that can lay as much claim as most can. We are probably going to want to have, if not an equivalent piece of research, another review to look at the effects of our acid rain policies sometime in the future to see if in fact we will get the gains that we believe they will.

Mr. **Green**. On the timing question, I guess because you expect aerosol to disappear relatively quickly as the controls will impose, that you would say that the health effects are likely to develop more promptly than restoring an ecological system?

Mr. **Reilly**. Yes, I would, that is right.

Mr. **Rosenberg**. But there is another factor. The controls are being imposed over a ten-year period. The bill is not going to be passed and then three years from now all the controls are going to go in. Approximately 3.5 million tons of reduction will be targeted for 1998, and then another 5 million tons of reduction will be targeted for the year 2000, with a couple of years of slippage in that number depending upon certain incentives, so that as a way to minimize the economic impact on ratepayers and the economic impact on coal miners, the program is really going to ramp up over a 10-year period, and only after it is fully operated can you expect to see significant reductions.

LIMB PROGRAM

Mr. **Green**. Well, in talking about the economic impact, this subcommittee as you know has taken a great deal of interest in the LIMB program, and I understood that most of the work on both the T-fired and the wall-fired furnace has been done, and proven successful in getting about 50 percent of the sulfur dioxide out of the coals. Is that accurate?

Mr. **Bretthauer**. That is correct. The LIMB by itself has about a 50 percent efficiency.

Mr. **Green**. And then two LIMB?

Mr. **Bretthauer**. Decreases the efficiency. The efficiency of the LIMB process is around 50 percent, as you indicated. When a new process is used in conjunction with that process, one we refer to as ADVACATE, it increases the efficiency up to about 90 percent, although we haven't done the large-scale field test on that process at this point.

Mr. **Green**. And what is your timing to do that field process testing? What goes into the ADVACATE system, what is involved in the field processing and how much money is being referred to?

Mr. **Bretthauer**. Well, currently we are having discussions with DOE in respect to testing that technology at a plant in Virginia. I can't tell you at this point that we have a final figure with respect to the size of the budget that will be required for that testing procedure.

Mr. **Green**. Because we had gone as high as $15.8 million at one point I think in terms of funding the LIMB program. Could you tell us how the ADVACATE add-on works, in laymen's terms?

Mr. **Bretthauer**. Well, I will try. It is a process which increases the basic efficiency of the limestone injection process, where you can reuse sorbent and therefore get much higher efficiency then you would otherwise; and the efficiency in laboratory tests is about 80 percent. But again, it has not been done on a full-scale field test at this point.

Mr. **Green**. Assuming it works out, does the legislation that is currently pending in the Senate-passed bill or the version that is out of committee in the House accommodate this kind of approach?

Mr. **Reilly**. Yes, sir, very much so.

Mr. **Rosenberg**. Indeed it does, but what we have done in the legislation is target reductions and under an emissions allowance system, which we consider to be a major innovation, we are saying to a utility there if you put a continuing emissions monitor on the plant so we know what the pollution is, you can do anything you want to reduce the pollution from that plant.

And if this is a competitive technology, there would be a great demand for application, because the bill will establish a 10 million ton reduction, and there will be literally hundreds of plants around the country that will have to employ technology or change fuels, or impose other efficiency practices to reduce the pollution.

So that this, the bill establishes a market for pollution control of SO_2 and NO_X, and if this turns out to be cost-effective, then there will be a great demand for the technology.

Mr. **Green**. I would hope if you would have some firmer figures before we mark up as to what you need to do the field testing, we could be made aware of it.

Mr. **Bretthauer**. We will provide you those figures. They are currently in development.

Mr. **Rosenberg**. Of course there is a $2.5 billion appropriation that resides in the Department of Energy now in technology, this would be one part of that, if they would agree to fund the test, which is what we are trying to ask them to do.

Mr. **Traxler**. Mrs. Boggs?

Mrs. **Boggs**. We have a vote.

Mr. **Traxler**. We do?

Mrs. **Boggs**. We have about two minutes left.

Mr. **Traxler**. We will be back in a moment.

[Recess.]

GLOBAL WARMING

Mr. **Traxler**. To reconvene, we are going to talk a bit about global warming. This subcommittee is one of the key committees, in fact it is the key committee in this initiative in terms of the funding.

It is interesting the way it worked out. About 80 percent of the President's recommendations comes from this subcommittee.

There is a lot of controversy, I suppose, or differences of opinion as to whether or not there is global warming or such a phenomenon. There was some NASA data that suggested that there is no evidence of global warming. Some people would hang their hat on that kind of information.

But, I think there are a lot of people who feel that maybe we need a good look. Then on the other hand, we also know there are very legitimate concerns in many of our parts that if we wait 10 or

15 years that we may have lost an opportunity and be very far behind.

Whether it is too early to rush to judgment or whether we ought to be doing some things now besides research, I think is a question for you. Are we embarking on the proper course of scientific inquiry in a sense, or ought we to be making an assumption that indeed we have a serious problem and begin to put in place, at least in some preliminary fashion, remedial lessons while we are waiting? Remember, we had 10 years and $600 million on the acid rain study.

What ought to be our posture in connection with what some perceive as a serious threat to Planet Earth?

Mr. **Reilly**. For those who draw the analogy between the acid rain study and the NAPAP research considered by many a substitute for an active policy, that would not be a fair analogy to global warming.

I think in this Administration the global climate issue has received more high level attention than probably any other issue I am aware of. We were very conscious, for example, in developing the "America the Beautiful" program, specifically the tree planting program that will have us planting four trees per person for each of the next five years, of its advantages in terms of capturing carbon.

It looks as though a few years out we will get a 4 to 5 percent reduction of CO_2 as a result of that program.

Mr. **Traxler**. How long will that take?

Mr. **Reilly**. Sometime later in this decade. This reduction will come as a consequence of a large number of trees, 5 billion by 1995, which will begin to add rings that attract more carbon as they mature in that period. We anticipate around the turn of the century, somewhere into the next decade 4 to 5 percent as a consequence of that tree planting program.

I am not aware that the Europeans have anything equivalent to it.

Mr. **Green**. Four to five percent of what?

Mr. **Reilly**. Of CO_2 and equivalent emissions.

Mr. **Green**. In the U.S.A.?

Mr. **Reilly**. United States.

I point to that simply because we are giving a very high priority to research and to science. At the same time we are looking for other initiatives of that sort that do, in fact, have advantages of reducing our CO_2.

When the energy conservation element is proposed as part of the energy strategy, I think we will be able to do at least as well. We would expect to see significant incentives.

Now, the distinction we have drawn as an Administration is we have opportunities to have impacts on our greenhouse gases where those policies also have significant advantages with respect to other problems we are addressing. Tree planting provides all sort of environmental benefits in terms of reducing erosion, reducing the energy needs in cities, of shading streets and beautifying the countryside. All of those are important.

I would expect we will continue to pursue such policies throughout the 1990s. I know that as we assess the impact of our own programs, we are very conscious of ways to promote energy conservation, ways to promote waste reduction. They are often quite the same or at least very similar, and in the process to reduce these greenhouse emissions as well.

TREE PLANTING PROGRAM

Mr. **Traxler**. You mentioned a percentage in terms of what this nation will be doing over the next five years in a tree planting program.

Isn't the counterpoint on that that the cutting of the tropical rain forest is proceeding at such a point that it will offset what we are doing? What are the tradeoffs?

Mr. **Reilly**. It may offset what we are doing. Though one of the European ministers, I think the German Minister of Environment, pointed out to me that the consequence of the United States planting at the rate we proposed over 10 years would provide more than 10 percent of the goal that was set by a conference for reforesting the world.

I think that goal was something in the range of 15 million hectares. We will expect to cover a very appreciable part of that ourselves in the United States.

We are, however, at the same time trying to get more forest conservation in the developing world. We have been active in encouraging the World Bank to consider ways to enhance the protections it gives, such as loans for projects that protect the forest, and also to discourage the investments it has made, such as road building in sensitive areas, which attract new populations to the forest regions and result in forest destruction.

I think in response to some of those concerns the President has raised, the World Bank proposed a new so-called green window, whereby they will make new funds available, something between 1.2 and 2.4 billion specifically for help to the developing world in finding substitutes for CFC's and also for reducing their own contribution to greenhouse gas emissions and for preserving forests.

We are actively pursuing those opportunities.

The particularly urgent one is the forest tree concern because within a matter of 12 to 15 years a good many of the large and still integral forest systems will no longer be intact. They are disappearing that fast. I know the President has met with then President-elect Collor of Brazil.

We are tremendously encouraged to discover the new Brazilian Government has given a much higher priority to forests both publicly and in private measures, such as conservation of the Amazon. Their minister declared in favor of conservation of 80 percent of the Amazon forest. That will not be easy to achieve.

We are trying to work with them and other countries to help them.

Mrs. **Boggs**. Mr. Chairman, may I say something about tree planting and forests?

Mr. **Traxler**. Yes.

URBAN TREE PLANTING

Mrs. **Boggs**. Tree planting in the United States is, especially in urban areas, is so important, not only for ozone protection, but also for erosion prevention and absorbing water that causes flash flooding.

Texaco has entered into a wonderful program with the U.S. Forest Service. It is a program that engages the interests, cooperation and the work of their employees. In the 3 cities in which Texaco has the greatest number of employees—Houston, New Orleans and Denver, they are planting $1 billion worth of trees.

The employees not only become involved in the actual planting and care of the trees, but they then become very conscious of the affect that the tree planting has on other kinds of air and water pollution. They also become aware of the consequences of deforestation and of the impact of all the conveniences that we employ in our modern living.

Many industries are teaming up with the "America the Beautiful" program and doing things of this sort, and it has made many of them conscious of the difficulties in some of the other countries where they may have installations.

There has been, apparently, a good find of oil off the coast of the Congo.

The Congo has one of the last totally contained rain forests in that part of Africa. There are plans now among the various oil companies operating in the waters off its coast to make it an economically viable enterprise to maintain a rain forest.

What we have to remember in those countries is that, when people cut down the forests, they are trying to improve their standard of living, as well as make a living.

So, I do think that these kinds of initiatives are extraordinarily important, not just to localities where they are in place, but also to the world at large. Whatever we can do to encourage forestation programs is well worth our while.

Mr. **Traxler**. Mrs. Boggs—you made an interesting point about developing nations and the importance of them using their forests for increasing the standard of living. I come from a state that is flooded with hardwoods of all types, beautiful.

Every inch of it was lumbered over. Don't think the South Americans don't know that because they remind me as soon as they find out I am from Michigan. I never discuss deforestation.

Mr. **Reilly**. This current program gives us a little better defense against those kinds of criticisms when they are raised by developing countries.

The surface waters of the State of Michigan rose as a result of the cutting of those trees.

Mr. **Traxler**. It did put bread on the table for my ancestors.

WORLD POPULATION PROBLEM

Mr. **Green**. It seems to me that is inextricably wound up with the world population problem. Even if we could achieve a 50 percent reduction in the per capita, the emission of greenhouse gases, if the world population doubles, as it certainly will if we don't do more than we are doing in that area, we are going to be where we would have been anyway in a sense.

I guess my question is what has to be done to get the President interested in this issue in the way he was when he was Representative George Bush on the Republican Task Force on Population and Development and made this a major issue in the early 1970's?

Mr. **Reilly**. If you look at the budget for the Agency for International Development, it is surprisingly filled with support for population programs.

Mr. **Green**. My recollection of the numbers is since the Mexico City doctrine was announced in 1985, the funding in nominal dollars has fallen from little under $300 million to a little over $230 million, which is——

Mr. **Reilly**. I guess this is a relative conclusion I am drawing. I looked at those numbers and I am surprised to see there is anything.

Mr. **Traxler**. You really see the best in a half empty glass.

Mr. **Reilly**. There are reasons obviously why the support has been withdrawn from the causes that had previously gotten support.

I only mention it to indicate that this is not an utter discontinuity. There is still support for population assistance.

Obviously, what you say is correct. I had personal familiarity with a number of countries, Kenya, Mexico, Thailand, conditions ones are such that the population will be degraded every——

Mr. **Green**. You are talking tropical rain forests. It seems to me this is going to be an environmental Administration, at least in terms of world issues.

It has really got to address the population problem.

GLOBAL WARMING POLICY RESEARCH BUDGET

Mr. **Traxler**. The EPA recommended budget for global warming policy research is $9 million this year down from $12 million in 1990 or a cut of 25 percent.

How do you put the proper spin on that number? What was your request of OMB for that account?

Mr. **Reilly**. This is an outstanding one. First, most simply, we had two very ambitious projects underway that have phased down. One to assess the effects of climate change over time and the other to try to determine what it would take in the way of policy responses, policy choices to stabilize greenhouse gas emissions.

We have no current enterprise that supplanted or succeeded these. To that degree, you see a fall off in outlays.

Terry, you want to add to that?

Mr. **Davies**. That is the answer.

Mr. **Reilly**. All right.

Mr. **Traxler**. Question, what was your request of OMB for global warming research?

Mr. **Reilly**. We are going to submit that for the record.

Do you want the total for both research and policy?

Mr. **Traxler**. No, your global warming research request to OMB.

Mr. **Bretthauer**. We will submit that for the record.

[The information follows:]

Global Warming Budget Request

In FY 91 the total research request to OMB for global change research was $36.1 million.

ROLE OF EPA IN GLOBAL WARMING

Mr. **Traxler**. We will read it.

What do you see as your role in relation to NASA and NSF in terms of global warming effort? Of course, the Administration has the Committee on Earth Sciences task force, which we have discussed with you and we have agreed that it is a very fine initiative. A lot of good coordination has come out of that, some nine reports.

Where actually does EPA fit into the global warming issue?

How do you see your Agency in relation to other government agencies who also have a piece of this concern?

Mr. **Reilly**. Well, there is a research issue and then there is a policy issue.

With respect to research, we have a relatively small part of that total Committee on Earth Sciences pie.

Our part is a key, I think, critical part in that it is concerned with the ecological effects of climate change. For example, we are trying to assess the impacts on forests, and looking at near term effects on estuaries and fish resources that no other Agency in that group is doing to the same extent.

With respect to policy, we have had a fairly significant role developing the reports that I mentioned, certainly working with other governments on these issues, with the United Nation's Environment Program and the intergovernmental panel on Climate Change. That has involved a number of other offices.

We have done other things with respect to specific greenhouse gases, trying to get a fix on the total emissions that come from the United States, a critical job leading up to negotiations on the treaty. We need to figure out what our base is and what our overall emissions picture looks like.

EPA has had a critical role in that.

I think that our analytic capability at EPA with respect to a range of disciplines, including economics, is as good or better than most other agencies of the Federal Government.

That certainly has been what has kept us so centrally involved in this issue and made us such a continuing contributor to policy dialogue that has gone on thus far.

GLOBAL WARMING BUDGET

Mr. **Traxler**. We note in looking at the President's budget that in his recommendations on the global warming initiative, NASA has the biggest chunk of the federal expenditures. EPA's are relatively small. Do you think that the Agency should have a greater funding role and perhaps more input into these initiatives?

If we look at, for instance, the ecosystem, satellites with a necessity for probably some facilities, computers, software, quite an effort. The question is what role should EPA play in this initiative in terms of funding or participation? As I listen to you, I see you as primarily the beneficiary of data that is collected and disseminated. You will be receiving it and doing some interpreting. But in terms of any other role, do you see yourself doing something besides that?

Mr. **Reilly**. Well, NASA's role in all of this is expensive simply because of their technology and the kinds of things they are going to do involves a lot of technology. Their dollar figure is a magnitude higher than EPA's.

It does strike me that when, for example, there is an initiative such as the tree planting initiative, the Agency that is turned to is uniquely EPA. We continue to play that role.

Everyone acknowledges that we are the ones who know how to do it. We are, I think, as good as anyone critiquing these economic studies that increasingly are playing a critical role in determining the scope of policy options.

I have had a discussion with Admiral Truly about working more closely with NASA in some of these areas. We regard the CES effort as a very successful one, a kind of model for how you put together an interagency research program agenda involving this many agencies on a major cross-cutting problem.

I guess I would say the Agency generally, I am sure Erich would agree with this, has wanted for some time to give a higher priority to research, to be regarded more as a capable player in the research field than, in fact, it has been able to do for a variety of reasons: Our ability to work with the academic community, to relate to outside institutions who can rely on us for research support, our inability to attract a reasonable number of researchers who will hitch their wagon to our star over time simply because it is likely to give less milk, to make metaphors.

We have taken those concerns into account in this budget and have proposed increases in the grants we are making to outside researchers and the level of activity we have with them.

I think we aspire to do more in research generally. In this area I have been reasonably pleased that for a smaller amount of money that has been spent on climate research within EPA, I think the government, and the country, and the international community have gotten a wholly disproportionate benefit.

Mr. **Traxler**. How important do you think the data will be that will be coming forth from the NASA effort?

How do you see the agency utilizing it? What do you anticipate we are going to get out of it, not in detail, but in parameters? What do you see as the consequences of this? We are going to spend a lot of money on this.

Mr. **Reilly**. It is worth spending money on. We very much need answers to a large number of questions. The importance of what NASA can put in the report, it did some weeks ago on its observations in space, is crucial, though I think it was misunderstood.

The press tended to focus on the fact that that time NASA found no warming over the 10 year period in which they were observing the earth. That may be correct, but it doesn't necessarily signify anything given it was such a short period of time.

The significance of the NASA work, as I understand it, is that they found a coincidence between their observations in space and thermometer temperatures on the ground giving us confidence that that kind of information over time is reliable.

We are going to rely on them. I think NASA plays a role for the rest of the world. I would support their large and ambitious role in increasing activity that is contemplated this year.

Mr. **Traxler**. Is there any sense that we are going to spend $30 billion to get snapshots that will show the train hitting the wall at about 2010?

Mr. **Reilly**. I can't really say what it is going to show other than it certainly is the consensus——

Mr. **Traxler**. You can be a prophet here now.

Mr. **Reilly**. It certainly is the consensus of the vast preponderance of atmospheric scientists that I am aware of that we are likely to see warming as a consequence of continuing build up of CO_2. That is what I think everyone expects.

No one is able to prove it at this time, though.

EPA GLOBAL WARMING RESEARCH

Mr. **Traxler**. From the standpoint of this subcommittee, we are always looking for ways to accomplish or assign responsibilities. To the extent that we can in a sense look at different parts within the subcommittee for various programs, perhaps in a combined fashion that pleases us because often with our 302(b) allocation, and I have not given you a lecture on 302(b) allocation, but take last year's and read it.

The point that we raised was, would it make sense, if the authorizers permit it, to allocate some funding from EPA to NASA for construction of facilities and/or purchase of equipment in order to assist in making the EO system a reality?

They have been designated the lead agency in this matter. Do you see a role for EPA? Since you are going to be in a sense a beneficiary of much of this information, shouldn't you participate in some fashion with the capital outlay?

Mr. **Reilly**. I never thought of it.

Mr. **Traxler**. We think of it constantly in a very serious fashion because of the strain that it puts on their budget. Hopefully, it will be showing up in the President's recommendations in a very meaningful way in the near future.

I think in a sense, if I understand the President's position correctly, he is a very strong believer in doing something in the area of global warming. He is careful what he says on the subject, however.

I think there is no program, no conventional wisdom, that has seized Members' attention more than this one and it has support across the political spectrum, naturally for different reasons among the philosophical views present in this Congress. There is a strong base of support for this program.

The issue is once we bring it up to speed, we then spend these dollars. Where do we find them?

Mr. **Reilly**. Your question is would it make sense to put clients effectively closer to the developers of information to make sure the right questions are asked?

Mr. **Traxler**. No.

The question is, is it appropriate for EPA to fund some of the capital outlay out of its budget, the construction and the equipment that are necessary for the program?

Mr. **Grizzle**. Mr. Chairman, you know, it seems to me that we would be delighted to enter into an interagency agreement with NASA.

When you look at the money that historically has been appropriated to our account for buildings and facilities, it has historically been a pretty minuscule amount. We have laboratories across the country crying for funds just for health and safety requirements.

I think certainly to the extent that there is money provided to the Agency for buildings and facilities we can cooperate with NASA, we think it is worthwhile. We being the poor little stepchild in this appropriations account would like more from NASA rather than they from us.

Mr. **Traxler**. In facilities, yes.

Mr. **Reilly**. On the subject of facilities, I would underscore what Charles Grizzle said. One of the things that has impressed me a lot in visiting our researchers is the large need that we have, in the range of $100 million, just to replace current equipment.

It is an even larger number if you factor in what it will take to upgrade it. If we are to maintain our scientific capability at the level we would like, this is something that does need attention.

It rarely gets it. I hope you will take it seriously.

I am still not sure I follow the other issue, but would be glad to open a conversation on it and see what specific kinds of things conceivably we could make available to NASA to help carry out our mission, and perhaps what the cost might be to us in terms of other activities, other support foregone.

Mr. **Traxler**. Well——

Mr. **Reilly**. Maybe I had difficulty answering the question because I assumed you have to go the other way.

Mr. **Traxler**. Remember, this is a low outlay rate for this type of program. What we are looking for is a broader variety of funding, as broad as we can get, to do some of the brick and mortar things and some of the equipment things when that becomes necessary after certain things have happened with the hardware.

Naturally if we have a philosophy of user pay, the question would be should you be making a contribution from your budget towards this. Of course Charlie is saying only after you take care of our needs.

We understand that.

Mrs. **Boggs**. Mr. Chairman?

Mr. **Traxler**. Yes, Madam.

Mrs. **Boggs**. We also have the remarkable input of Admiral Watkins. I think we should consider all of those activities and the fact that we have the national lab.

Mr. **Traxler**. We have to know we will be using a considerable portion of this information as well, and the Department of Agriculture which will benefit from it as well.

AIR PROGRAMS

Okay, let's turn for a moment to the air programs.

Then we will do some budget questions here.

You are requesting $389,719,000 in 1991. We asked earlier how much additional funding would be needed if the current Senate version of the bill is enacted or some variation of the Senate or House reported bills.

What do you think a rough guess would be at this moment in time?

Mr. **Reilly**. In terms of the bill we think likely to pass?

Mr. **Traxler**. With the understanding it is a guesstimate.

Mr. **Reilly**. I am not even sure I want to do that. There are so many unknowns.

There are a good many additional requirements that we had not contemplated when——

Mr. **Traxler**. I appreciate it.

We need to know it, since we are not going to be able to plug in a magic number in the 1991 appropriations bill, although some people argue we are not going to have appropriations bills on the President's desk until next December.

I could say it will get there about the same time as the clean air bill does.

We are assuming while the budget carries the $83 million for clean air implementation, is there any doubt you are going to need more money than that?

Mr. **Reilly**. Well, I think I will still pass on that, if I might, and defer to the legislative process.

Mr. **Traxler**. Okay.

Now, this is a very important point for us because we don't, we have to rely upon you to tell us how much money you need.

Would the Agency seek supplemental appropriations at the first of the year from OMB? Is it clear to you that was a requirement in order to enforce the provisions of the newly enacted law?

Mr. **Reilly**. Yes, sir, I would.

UNFUNDED AUTHORIZATIONS

Mr. **Traxler**. Unfunded authorizations, and this is a difficult issue for the Committee. We have a number of authorizations that aren't funded, sitting and waiting for money. Of course, EPA has a number of those. You have several authorizing subcommittees, and they are very active.

They create numerous programs which we have not been able to find the money for. Does anyone know what the total might be of these unfunded programs?

Mr. **Reilly**. Let's see what they are.

Noise is one such program. What others do you have?

Mr. **Traxler**. Let's hand it back to you and say for the record develop the programs and your judgment as to what the costs are for fiscal year 1991.

Mr. **Grizzle**. Mr. Chairman, for clarification, unfunded authorizations for which the Administration didn't submit a request or whether, or either way?

Mr. **Traxler**. Yes.

Mr. **Grizzle**. Everything?

Mr. **Traxler**. Everything.

[The information follows:]

AUTHORIZATION OF APPROPRIATIONS: FY 1991 AUTHORIZED LEVELS vs. FY 1991 BUDGET REQUEST

(dollars in millions)

	FY 1991 Authorized	FY 1991 Request
Federal Water Pollution Control Act..................	$2,530,000.0	$1,940,744.0
Marine Protection, Research & Sanctuaries Act .... ***(Expires 9/30/90)	0.0	9,487.5
Clean Air Act, as Amended....... ***(Expired 9/30/81)	0.0	294,863.5
FIFRA...........................	95,000.0	94,666.6
Asbestos School Hazards Abatement Act.................. ***(Expires 9/30/90)	0.0	0.0
Resource Conservation & Recovery Act................ ***(Expired 9/30/88)	0.0	270,498.6
Safe Drinking Water Act of 1974.	199,570.0	99,275.8
Environmental Research, Development & Demonstration Act........... ***(Expired 9/30/81)	0.0	291,792.6
Toxic Substances Control Act.... ***(Expired 9/30/83)	0.0	42,566.4
Indoor Radon Abatement Act (1)..	17,000.0	24,500.0
CERCLA/SUPERFUND:		1,851,925.8
Trust Fund Authorized 5-year level................	8,500,000.0	-
(Trust Fund Available Balance FY'91)	(5,859,100.0)	
Other EPA funds not authorized in a special section...............		660,388.4
TOTAL............................		$5,580,709.2

(1) Indoor Radon Abatement: Includes authorization of $3 million that is available until expended.

INDOOR AIR POLLUTION

Mr. **Traxler**. That is based on the list of the unfunded programmatic authorizations within the appropriate section of this.

You are looking for $94,927,000 for air research. What role does indoor air pollution play in our lives? Is it a threat?

Mr. **Reilly**. I think as time goes on we are discovering that indoor air looms larger certainly than anyone imagined when the Clean Air Act first was written. We now have the anomaly of attending much more to the quality of the air outdoors, where people spend less than half their time, and paying relatively little attention to indoor air.

We had begun to take the issue much more seriously in recent years. Our research budget for indoor air is going up this year.

We are doing an increasing amount of work at our North Carolina facility to assess the impact of pesticides in the home, in wood preservatives, of carpet adhesives in which we have had a particularly unhappy direct experience at EPA, our headquarters building, paints, solvents, things of that sort, ventilation systems, stoves, all of which have contributed to this problem.

Erich, would you like to do to that?

Mr. **Bretthauer**. We have a major activity to characterize the indoor air environment. What are the chemicals there that we are exposed to in our daily lives? What are the concentrations? How do they behave in the indoor environment? How long do they persist? Then we have a program to look at the health effects of those major indoor air pollutants, focusing primarily on those that we believe are most important.

We also have a home that we use in the North Carolina area to do some of these studies so that we can simulate the actual home environment.

Mr. **Reilly**. We have also completed a report on indoor air that we will make available to the committee this year.

Mr. **Traxler**. Thank you.

In 1987, the Agency ranked indoor air quality as number four among its list of environmental problems that pose a risk to human health. Would you still put it at that level? Would it be lower, higher?

Where do you see it?

Mr. **Reilly**. Well, if you start with the radon exposure and the number of premature cancer deaths we associate with it, I think you would have to continue it as very high, certainly in that range.

Mr. **Traxler**. In fiscal year 1991 the budget proposal is $5.5 million, which is an increase of $1.5 million for indoor air research. That is only 4.7 percent of overall air research.

If we are thinking about the issue of risk rating and if we see this as number four, are we to increase that number to something more meaningful? If we were to do that, could you intelligently apply those numbers to this research?

Mr. **Reilly**. What, in fact, we would do with those funds—I agree it looks anomalous that such a small part of the outlay is directed toward indoor air.

You want to comment on that, Erich?

Mr. **Bretthauer**. I am certain we could use the funds. There remains a significant need to better understand those chemicals to which we are exposed and to develop the methodology for doing so.

We laid out a long term research agenda which has been made available to the Congress.

Mr. **Traxler**. Provide for the record the internal EPA request for OMB for this entire research?

[The information follows:]

Indoor Air Budget Request

The total request to OMB for indoor air research was $8,323,800 of which $6,408,900 was for R&D and $1,914,900 was for S&E.

Mr. **Traxler**. The justification indicates your indoor air program will provide leadership and coordination within the Federal Government. What other federal activities or programs is your indoor air program coordinating? What other agencies are involved with you on this?

Mr. **Bretthauer**. There is a committee, whose name I can't recall at the present time, a multi-agency committee which coordinates research activities with respect to air. It meets periodically. There is a research component of that which our Office of Research and Development is involved in and also programmatic development in which the Office of Air and Radiation is involved.

Mr. **Traxler**. Provide for us the 1991 budget with those other agencies as it relates to indoor air research.

Mr. **Bretthauer**. We will.

[The information follows:]

Indoor Air—Other Agencies

The Environmental Protection Agency coordinates indoor air quality research through the interagency Committee on Indoor Air Quality (CIAQ). The committee is co-chaired by four agencies—the Environmental Protection Agency (EPA), the Department of Energy (DOE), the Department of Human Health Services (DHHS), and the Consumer Product Safety Council (CPSC). In the past the CIAQ had not compiled each agency's respective indoor air research budget. We have requested the FY 1991 information from each agency on the basis of your question and are proposing to have the CIAQ collect budget information on an annual basis in the future. We will send you the information we receive on the FY 1991 Budget within the next several weeks.

INDOOR AIR FUNDING

Mr. **Traxler**. Does the agency have any impact in shaping the request for indoor air related funding in these other agencies? How much do you coordinate your budget request for expenditures in those areas?

Mr. **Bretthauer**. Well, there is some coordination in respect to the research portion of it, but it is relatively limited.

Mr. **Habicht**. This year we spent a lot of time looking at the range of indoor air issues. The Air Office program is increased by over $1 million, which is not a lot of money in the scheme of things, but it is about an 80 percent increase from their prior year's budget.

In terms of growth and priority, in terms of at the margin where we are putting money, that is significant. The Consumer Product Safety Commission, the National Institute for Occupational Safety and Health, there are a number of agencies we are working with. While we have not had formal line by line budget coordination, those groups are much more active.

Bill Reilly mentioned a number of studies we are doing. We came out with a decision to take a major look at the carpeting as a source of indoor air problems.

RADON ABATEMENT

Mr. **Traxler**. Don't forget adhesives that go into it. It is a very troublesome issue.

Let me ask you a question. For instance, in radon abatement, there are some interesting techniques, publications that are out.

I am not sure who is doing those, if it is HUD or EPA.

Mr. **Reilly**. It is us.

Mr. **Traxler**. Are you? The pipe under the cement floors, venting, that sort of thing, is that coming out of your Agency?

Mr. **Reilly**. Yes, it is. There was a 30-second spot which got a great deal of attention. We are trying to raise the public's awareness. We are trying to get people to go out and test their homes for radon.

Mr. **Traxler**. Very good.

Mr. **Rosenberg**. In 1991 we intend to focus as much attention on the schools as we have on the homes in the past.

We will do a national survey of radon schools and oversee state grants that are in the budget specifically for school abatement issues. We have principally concentrated on homes.

Now we are going to expand the concentration to homes and schools where we have some instances where the radon levels in Tennessee, for example, are gigantic. We are encouraging all the schools to test.

We are getting training programs, training centers at various universities around the country that are going into full gear now. Again we will expand from the homes to the schools.

Mr. **Reilly**. There is no one thing we can do about those problems. Motivating homeowners to take it seriously is important. That is why this program is very much one of providing public information, trying to raise consciousness, promote the idea of voluntary responses, remind the public of severity of the threat, because it is one of the higher risks, that we characterize.

To do that is involving us to go well beyond regulations and learning how to educate.

Mr. **Traxler**. The construction techniques we are now utilizing in home construction are all designed to contain energy loss.

When we do that, we don't get any type of meaningful air exchange system. We are working counterproductively. On one hand, we want an energy efficient home. On the other hand, we want a healthy home.

The issue is how do we achieve those goals simultaneously without a destructive aspect to it.

Mrs. Boggs, did you have a question?

Mrs. **Boggs**. No. I was just wondering about the advisory council you referred to, Erich.

Is that the Council on Environmental Quality?

Mr. **Bretthauer**. It is called the Committee on Indoor Air Quality.

RESEARCH PROJECTS

Mr. **Traxler**. Your August 1989 report to the Congress identified research needs in 50 areas, 33 of which you said needed to be initiated immediately in order to provide important information to the public or to provide more in-depth research on indoor air quality.

How many of those 33 high priority research projects were undertaken under your 1991 budget request?

Mr. **Bretthauer**. I would have to provide that for the record, but I believe over half of them are initiated. Those are long term. Each of those are long term multi-areas.

OZONE AND CARBON MONOXIDE CONTROL

Mr. **Traxler**. Understanding that caveat, would you also identify the ones you intended to work on.

[The information follows:]

INDOOR AIR - RESEARCH PROJECTS

Below is a listing of 23 of the 33 projects identified as primary projects. These projects are either completed, underway or will be initiated in our FY 91 research program. The remaining 10 projects are also listed.

Research Areas and Study Descriptions:

RISK ASSESSMENT METHODOLOGY FRAMEWORK

1. Risk Assessment Methods - Develop risk methodology procedures and perform assessments for major indoor air pollution scenarios, and conduct additional toxicological research vis-a-vis evaluation of respiratory hazards.

2. Supporting Information for Risk Assessment - Provide support for development and maintenance of data bases.

EXPOSURE ASSESSMENT AND MODELING

3. Monitoring and Measurement - Improve sampling and analytical techniques for volatile and semi-volatile organic compounds.

4. Monitoring and Measurement - Develop improved screening protocols, questionnaires, and measurement methods for complaint-building studies.

5. Monitoring and Measurement - Evaluate and validate new measurement methodologies under field conditions for aerosols, organics, biological species, and air exchange rates.

6. Data Management and Quality Assurance - Implement and maintain a source emissions data base incorporating source characteristics associated with emission factors.

7. Data Management and Quality Assurance - Implement and maintain an indoor air quality data repository.

SOURCE-SPECIFIC ISSUES

8. Combustion Source -

9. Environmental Tobacco Smoke (ETS) - Characterize and model ETS exposure to children.
10. Environmental Tobacco Smoke (ETS) - Develop ETS exposure dosimetry methods.

11. Indoor Combustion Appliances - Characterize emissions from kerosene heaters.

12. Material Sources - Measure emission rates of organic chemicals from building materials, furnishings, and consumer products.

13. Material Sources - Conduct comparisons of emissions from selected materials in small chambers, large chambers, and test houses.

14. Activity Sources - Develop measurement methods and generate emission factors for activities associated with personal care, maintenance, office work, leisure, and transportation.

15. Biological Contaminants - Prepare report on health effects, state-of-the-art sampling methods, and research needs.

16. Biological Contaminants -- Initiate development of standardized monitoring methods.

17. Biological Contaminants - Investigate contribution of HVAC equipment to indoor levels of biologicals.

CONTROL TECHNIQUES

18. Source-Specific - Evaluate effectiveness of source modifications, including changes in product composition or use, conditioning of building materials before use, and product substitution.

19. Air Cleaning - Conduct laboratory and field studies to determine the effectiveness of air cleaners for the control of indoor pollutants.

BUILDING SYSTEMS

20. Ventilation - Develop ventilation measurements that can be widely applied.

21. Ventilation - Develop techniques and protocols to measure ventilation effectiveness.

22. The Total Building System - Conduct prototype integrated assessments of the combined impacts of source emissions, pollutant levels, ventilation rates, and energy consumption in new building designs and perform follow-up measurements.

23. Technology Transfer Activities

Research Areas and Study Descriptions Not Currently Underway:

EXPOSURE ASSESSMENT AND MODELING

1. Data Management and Quality Assurance - Develop standard reference materials for measurement of indoor pollutants.

SOURCE-SPECIFIC NEEDS

2. Combustion Source - Environmental Tobacco Smoke - Evaluate cancer risks from ETS exposure.
3. Combustion Source - Environmental Tobacco Smoke - Study the non-cancer effects from ETS exposure.
4. Indoor Combustion Appliances - Prepare exposure assessment of kerosene heater, gas-space heater, wood stove and unvented gas stove emissions.
5. Material Sources - Characterize the human response produced by emissions from selected materials.
6. Material Sources - Evaluate health effects of substitute products and materials.
7. Activity Sources - Characterize indoor exposures to consumer-applied pesticides (and other toxicants).
8. Ambient Sources - Water - Investigate contribution of tap water in home humidifiers to indoor pollutant levels.
9. Biological Contaminants - Identify and establish baseline concentrations of major classes of biological contaminants.

BUILDING SYSTEMS

10. Field Measurements - Measure ventilation rates and ventilation effectiveness in complaint-building investigations and residences.

Mr. **Traxler**. Turn to page 2-57 in the justifications under Abatement and Control and under Air Quality Management Implementation, you talk about the measures required to attain National Ambient Air Quality Standards for ozone and carbon monoxide.

In 1987 the Agency proposed a policy to bring the areas into attainment with ozone and carbon monoxide standards. The Agency estimated at that time it would cost the state and local communities in the area about $120 million annually from 1989 through 1993.

The question is how do those costs of the ozone and carbon monoxide control requirements under the Senate-passed version of the Clean Air bill compare to the cost that EPA estimated in 1987?

Mr. **Rosenberg**. Under the version there is a $300 million program that was specifically delegated for states to collect fees in administering the air quality program. We think we have fully funded not only that aspect of state initiatives but other aspects of the Clean Air Bill.

In addition, for direct grants, as you have seen we are requesting a 52 percent increase. $33 million are actually going for state grants to facilitate recommendations in the Clean Air Act. That is one area where I think the combination of direct federal funding of this additional $33 million which is going to go towards inventory and things that are really long over due, plus the Title IV, I think it is Title IV of the bill, which is to establish a program which not only will enable us to track what specific sources have to do from a compliance and enforcement point of view, but will also derive $300 million of revenues from the states when they implement it. That is one of our goals in the bill, to establish a source of state funding for the state, enforcement and compliance. So far we have succeeded.

I must say that Mr. Rostenkowski has asked for consecutive, sequential referral. We are concerned, as the committee would be, that in his deliberations that those fees be retained.

Without them, there would be a major short fall at the state levels.

Mr. **Traxler**. Some things we can do something about.

How much is contained in the 1991 budget for ozone and carbon monoxide control? You may supply that for the record.

[The information follows:]

Ozone/Carbon Monoxide Control Budget Request

The Agency's 1991 budget request contains $140.2 million in total dollars for direct support for control of ozone and carbon monoxide. Of this amount, $67.1 million represents support to states through the state air grants program.

AIR QUALITY MONITORS

Mr. **Traxler**. There are about 4,700 air quality monitors in place to determine compliance with the Agency's national air quality standards. Apparently, some of these are in need of replacement. Additionally, we are told the network is still not complete.

Does the funding level requested in the proposed budget permit the completion and replacement of the air quality monitoring device and system? If not, how much additional money is going to be required? How much is in here for the system?

Mr. **Reilly**. We will supply that for the record.
[The information follows:]

Air Quality Monitoring Device and System

As of December 1989, 4704 air quality monitoring sites were in operation. The existing neworks meet all established requirements, however, with the passage of the Clean Air Act Amendments some expansions and enhancements to the network will be needed. Such changes will be required to provide optimum sampling of areas newly designated as non-attainment, provide added sampling in cities where the areal coverage of existing areas has been expanded, and in a variety of situations where special studies, update source inventories and other indicators provide evidence that long-term sampling at new locations should be done. Based on recent analyses done to develop cost estimates of implementing various provisions of the proposed Amendments, we believe that air monitoring will continue to be a dynamic process.

The Agency's request for FY 1991 includes grant funding that will address needs which we believe to be critical to strengthening state/local monitoring efforts. Based on funding requested in the President's budget request, a $5,675,000 increase will be allocated among these program:

Replacement of instruments that are obsolete or in poor condition. This would allow the initiation of a five-year replacement program.

Procurement of instruments needed to upgrade and optimize ambient networks for carbon monoxide and ozone. We envision that additional funding for this need will be required in FY 1992 through 1994.

Establishment of the initial phase of permanent networks for monitoring ozone precursors (non-methane organic compounds and nitrogen dioxide).

Over a five-year period we estimate the total cost for these three programs at $42,000,000 to $45,000,000. Although the replacement program will require five years, a large portions of the needs for optimization and for the precursor networks should be addressed within four years.

RADON PROGRAM

Mr. **Traxler**. You are structuring a program as a non-regulatory technical assistance program in partnership with the states even though you don't have a radon program?

Mr. **Reilly**. That is right.

Mr. **Traxler**. How many states have developed or implemented radon programs?

Mr. **Rosenberg**. We will have to give you that for the record.

Mr. **Reilly**. Twenty-five.

As I remember 25, but we will provide that for the record.

[The information follows:]

State Radon Programs

While most states use other existing programs to handle radon-related activities, a few (approximately five) have established fully developed radon programs. A fully developed program would include program management, public information, problems assessment, and program response activities. Approximately 25 states have less developed radon programs and currently conduct several types of activities, including radon surveys. The primary radon activity of the remaining states is response to public inquiries for information.

The number of states developing radon programs will be stimulated in the next year through grants from the State Indoor Radon Grant (SIRG) Program. As authorized by the Indoor Radon Abatement Act (IRAA), SIRG is intended to support the development mitigation of radon. EPA is in the process of awarding grants to 48 states, the District of Columbia, Puerto Rico, and two territories.

Mr. **Traxler**. Can we really in a sense just hand this off to the states and expect that they are going to establish a mitigation program for home, schools, public buildings? What are the prospects?

Mr. **Rosenberg**. We have had a lot of positive response. One thing that is happening is by making people aware, for example, the real estate industry in Michigan pretty well requires a radon test before the transfer of a home. It is a practice that it is being developed.

It looks to me like if we get the word out, there is a lot of self-correcting initiatives that are occurring. I think that the states are enthusiastic about it. They say with the grant program we have given them this year they can make progress.

It is premature to say it will or will not work. There is a lot of activity going forward and a lot of interest on the part of the governments in this area.

Mr. **Reilly**. With more than 100 million households and some appreciable number that are having a radon problem, the prospect for EPA impacting, specifically, on those households in any kind of regulatory way would be remote. We want to maintain the states very much involved in this and keep it non-regulatory.

Mr. **Traxler**. Do we have knowledge as to what percentage of the homes in the nation have been tested?

Mr. **Reilly**. It is very small. We were expecting we might take it from 2 to 8 million homes with the very active public education program that we have designed. Eight is still a small fraction of what we think are affected. With the current effort, that is as much as we expect to get.

RADON IN SCHOOLS

Mr. **Traxler**. Moving back to research, under Air and Enforcement, you are currently spending about $300,000 for research on radon mitigation in schools. What have you found?

Mr. **Rosenberg**. We have found that basically that is a testing program. We took five or six states and tested a substantial number of schools and found in certain regions there were quite a few problems. Now we are seeking to encourage the school boards. We have produced a report, a brochure, an explanation on how to test the schools. One of the high priorities of the state grant program is for them to get their schools to do the testing and do the remediation.

We found a lot of problems, as we expected to find, because schools like houses in the wrong places have quite a bit of radon. It is right now a public relations. We have to get the word out.

RADON DETECTION

Mr. **Traxler**. What have we learned about radon in terms of where you can expect to find it? What are the soil conditions that leads one to believe that there ought to be testing? Are there soil conditions in which you say the probabilities are 99.9 percent?

Mr. **Bretthauer**. Wherever you have uranium decay, you are likely to have radon as a product of uranium decay. Those areas are located in, more concentrated in various parts of the country. For example, on the Eastern Seaboard.

Mr. **Traxler**. What is that place?

Mr. **Bretthauer**. The Redding Prong. It is a geologically described area on the Eastern Seaboard where you have the concentration of radon generally higher. However, it is found in a number of other areas throughout the U.S. I think it is fair to say most of those higher concentrations are on the Eastern Seaboard, some higher ones in the Midwest.

In the Western areas, absent areas where uranium is actually mined, it doesn't appear to be as large a problem.

It is very spotty. You can have radon in one area and down the street not find that problem.

Mrs. **Boggs**. When you do your outreach to homes and schools, do you use the consumer pamphlets that are published by the consumer organization we have?

Mr. **Reilly**. They have, in fact, done some interesting things on this problem and have also, both characterized consciousness of the problem and then looked at the different types of little boxes, measuring devices on the market and made recommendations on that. Yes, we do.

Mr. **Rosenberg**. I will send you copies of what we send to people. We have this 1-800 number as a result of this publication program.

We are getting something like 20,000 calls a month. I will send you what they send to people who request information. I think we have taken what they produced and what other people produced and put it together in our own brochure.

Mrs. **Boggs**. The Consumer Information Center is its exact name.

Mr. **Reilly**. I am not specifically familiar with that.

Mr. **Rosenberg**. They are the distribution arm of this type of material from the Federal Government. In addition to that, we have a direct distribution program for people that phone into a 1-800 number. Then we have those advertisements.

We were one of the 10 new public service announcements that the advertising council selected like Smokey the Bear, that type of thing.

Now there is free advertising all around the country on radon detection. We have to pay for the production of the material, but we get free advertising.

Mr. **Reilly**. We ought to start the hearing with that in the morning. It wakes everyone up. It is stark and menacing, which it is designed to be.

It is supposed to cause people to take this problem seriously.

We also are going to produce a data base soon according to zip code so you can get information directly to those where your zip code has an elevated problem that ought to put you on special alert.

Mrs. **Boggs**. That is great.

Mr. **Reilly**. It is all somewhat new for the Agency. I think it is exciting.

Mrs. **Boggs**. A consumer information network is great. They do, of course, work with all the other agencies and departments in putting out information.

RADON IN SCHOOLS

Mr. **Traxler**. We gave you $1 million last year, a nice round number, for a survey of radon in schools. Tell us what has happened with that money. Has it been initiated? When do you anticipate results?

Mr. REILLY. We have surveyed radon in schools and made an announcement that received a good deal of attention on that problem, communicated it with the school districts, identified the particular kinds of areas they should be alerted to check. I can give you a run down.

Mr. TRAXLER. Did you use the one million dollars that we appropriated last year for that purpose?

It was earmarked for that purpose? I have a sense of what you are talking about, the study you are talking about probably predated this million. What do you think?

Mr. ROSENBERG. I think it is sort of an overlap. We had an early study. Now we have expanded it, and we expect to in 1991 expand it again.

Mr. TRAXLER. I am trying to get a refund.

Mr. ROSENBERG. Why don't we give you for the record what we did?

Mr. TRAXLER. Answer for the record what you have done. We need to know what happened to the million.

[The information follows:]

SCHOOL RADON SURVEY

We have obligated the $1 million appropriated in fiscal year 1990 for radon in schools. These funds will carry us through development of method for testing schools, design of a national school survey and initiation of the survey. We are currently preparing a survey design that will permit us to determine the distribution of radon levels in schools on a nationwide basis, as well as in schools located in high-risk areas. The survey will be limited to a randomly selected sample of public schools containing any of the grades kindergarten through 12th grade. Due to the size of the sample, the survey will not characterize the extent of radon problems in schools on a state-by-state basis. Measurements will be made in occupied rooms with direct ground contact.

The proposed survey design will be presented to the Agency's Science Advisory Board in May 1990. In June we plan to conduct a pre-test of the survey in nine schools in North Carolina. We will present the proposed survey design and questionnaire to OMB this summer. We also intend to purchase the measurement devices at this time.

Pending OMB's approval of the survey design and questionnaire, the data collection phase of the study will be initiated in the Fall of 1990. Data analysis should be completed by the Fall of 1991, and we will issue the final report to Congress by the Summer of 1992.

AIR ENFORCEMENT BUDGET

Mr. TRAXLER. Under the air enforcement budget, which is detailed beginning on page 2-66, you are requesting $25 million for the stationary source enforcement program, a 39 percent increase over 1990. For the record, what was the Agency's original request for this activity?

[The information follows:]

AIR ENFORCEMENT BUDGET REQUEST

The Agency's original request to OMB for the stationary source enforcement program was $27.5 million or a 52 percent increase over 1990. In addition to this amount, the Agency later amended its request to include support for activities directly related to Clean Air Act Amendments as proposed by the Administration, bringing the total request to $28.2 million.

Mr. TRAXLER. With that happy note, what is going to happen, we are going to adjourn for the day. We have got a vote on the Floor. We will bid you adieu until tomorrow. It has been a pleasure.

THURSDAY, APRIL 26, 1990.

GREAT LAKES

Mr. TRAXLER. Let's start the hearing. I have some questions and I don't know if you have any expertise on these matters. We are looking for the answers. We have an acute problem in the Great Lakes that several of you are aware of, and that is the importation and now the proliferation of a European mollusk. It is creating considerable problems for municipalities and there could be some serious environmental issues raised by it as well that we are not aware of at this time.

My question is, while there is considerable interest in the House and the Senate on doing some research or talking with the Europeans, opening up some kind of communication there and perhaps doing some grants or in-house research on this issue. Can anyone tell me, are we very early on on this, or is something going on that we ought to know about? If we made some money available for research, could you use it, and what would you do with it?

Mr. REILLY. Well, the one thing that I am aware of that has been done is, and I am not sure how far it has proceeded, is the change in practice whereby ballast water is to be exchanged on the high seas before the ships enter the Saint Lawrence, but that, of course, doesn't have any effect on the existing populations, as it is very rapidly proliferating organisms.

Are you aware, Erich, of anything?

Mr. BRETTHAUER. I am vaguely aware of it; We have a laboratory in Grosse Ile, Michigan, and a group of scientists at our Narragansett Laboratory who are looking at this situation at this time, in respect to the larger program that we have called our ecological monitoring and assessment program.

We are trying to look at this type of ecological problem. I can't tell you exactly where that is at this moment.

Mr. TRAXLER. Well, let's do this.

For the record, expand on your answer. What we need to know is, what have the Europeans done in regard to this problem, because it is something that they have lived with. I assume they have tried to find some solution to the clogged intake pipes.

What are they doing? What have they done? And the next issue is what ought we be doing that could be of assistance to us. What is happening with the ecosystem in the Great Lakes is devastating, because these little suckers simply expand like paramecium rabbits and it is incredible.

So please look into it, and include in your response perhaps some ideas as to what resources maybe necessary for this issue.

Mr. HABICHT. I would just mention also, Mr. Chairman, that this subject has come up recently in discussions that we have had with the Canadians.

Mr. TRAXLER. Good, good.

Mr. HABICHT. We are going to work together.

Mr. TRAXLER. Well, it is nice to assure them that we are cooperating.

[The information follows:]

INTERNATIONAL RESEARCH EFFORTS ON EUROPEAN MOLLUSK

It is a pleasure for me to inform you of the role that EPA's Office of Research and Development (ORD) will have in assessing the environmental impact of and possible remedies for the zebra mussel infestation of the Great Lakes and other U.S. waters. There is a unique role for EPA to systematically document the spread of this highly competitive species through the Great Lakes and into other fresh waters throughout America, as well as documenting the ecological impacts in the fresh water environment. Numerous public meetings in Canada and the U.S. have helped to document the spread of zebra mussels and the problems they are causing in the Great Lakes. These meetings stimulated a variety of research projects throughout the Great Lakes community, many of which could provide, by this fall, important additions to our knowledge base to guide public policy over the next few years. My office will commit $50,000 for an international symposium in October or November to promote the compilation of this knowledge and to guide the new research program beginning in 1991. We are evaluating the possibility for conducting this symposium at Saginaw Valley State College in Michigan because of its central location in the Great Lakes region.

EPA is not the only participant in this effort. NOAA, Fish and Wildlife Service, and the Great Lakes Fisheries Commission are developing plans to address this issue. In 1991, ORD will expand the Environmental Monitoring and Assessment Program (EMAP) to include the Great Lakes ecosystems. EMAP is designed to document the long-term status and trends of our ecological resources and to identify relationships between the condition of ecosystems and probable causes. It will also be important to monitor fresh waters in many parts of the U.S. for zebra mussels. However, EMAP-Great Lakes will coordinate with other Federal and State agencies and direct our effort to address three important scientific needs:

1. EMAP-Great Lakes will evaluate methods to monitor the zebra mussel larvae (veligers) in near shore and open waters.

2. EMAP will incorporate zebra mussel larvae into the status and trends monitoring to quantify the spread of zebra mussels.

3. EMAP-Great Lakes will develop the data base needed to quantify the impacts of this organism on the biological diversity and ecosystem health in the Great Lakes. Because Great Lakes wetlands are rare and endangered, the impact of zebra mussels on these warmer, nutrient-rich ecosystems will hold particular importance.

Looking to the future, EPA is particularly concerned about the spread of the zebra mussel and how it will effect the environment and the "natural balances" in the ecosystem, especially since there can be as many as thirty thousand mussels per square meter which could filter all the water in Lake St. Clair several times a day.

This could drastically reduce the food supply for competing organisms. I am confident our zebra mussel symposium will identify urgent research needs which will require a concerted effort by Federal, State and Provincial agencies, the Great Lakes Fisheries Commission, and the Great Lakes academic community.

Although our FY 1991 budget request does not include resources for research in this area, we will develop appropriate research initiatives to address these needs. Such initiatives would include utilization of the considerable expertise already in the Great Lakes academic community. In fact, any research will be carried out by Great Lakes universities.

EPA is responsible for developing ecosystem food-web models for the accumulation of toxic chemicals in Great Lakes fish for the purpose of Lakewide Management Plans. The enormous feeding and reproductive capabilities of this mussel in the absence of predators will modify ecological energy flow in the Great Lakes food-webs and could greatly increase the transport of toxic chemicals from sediments to fish or birds. Our sediment quality assessment program in the Great Lakes has developed a new technology for acoustically mapping sediment characteristics. We will evaluate the use of this technology for identifying potential mussel colonization sites in several areas, including Saginaw Bay. Finally, my office will evaluate the long-term environmental impacts of chemical anti-fouling agents which might be proposed to ensure that we minimize the economic impact of zebra mussels without causing further risk to our Great Lakes ecosystems.

In regard to your specific question on what the Europeans are doing to control mussels at water intakes, some of the controls include periodic back-flushing of hot water or chlorine through the pipes, increasing intake pipe size and, where possible, placing the intakes below the depth that mussels are found. The effects of these mitigation techniques at the pipe, or when applied to the natural environment, are not well understood at this time.

CFC REDUCTION

Mr. **Traxler**. The Montreal Protocol requires a reduction of 50 percent of CFC by what year?

Mr. **Reilly**. 1998.

Mr. **Traxler**. Does your research tell you that in order to make a dent in the ozone problem the reduction has to be 100 percent? Does it get worse at 50 percent?

Mr. **Reilly**. The current status of the Protocol is that we and more than 50 other countries now are committed to achieving 50 percent reductions by 1998. The developing countries have a lag time of an additional 10 years or so to comply.

We have, the United States and now in Western Europe, European Community, Japan, Soviet Union, Canada, a number of countries, have committed to going further beyond those goals, and to a full phase-out by the year 2000.

Some countries, West Germany and the Netherlands will try to achieve a 50 percent phase-out or reduction by several years before that date.

We will go to London in June to renegotiate the protocol and hopefully come home with a new agreement to achieve full phase-out by the year 2000.

DEVELOPING COUNTRIES RATIFYING THE PROTOCOL

A number of issues associated with that, one of which is the availability of funding to bring some of the major developing countries that have the capacity to ratify the existing Protocol, much less decide to put a full phase-out and we were informed just last week that the Government of India will not ratify the Protocol without transfer of funds and some help with substitutes. We hope to address that issue in June, and the Protocol commits the developed world to assist countries in dealing with some of those needs.

We have done studies of three countries to try to assess their needs. Mexico, Brazil and Egypt have some reasonably clear idea of what is likely to be involved in changing processes and moving to other forms of refrigeration and insulation and they are not off the scale of cost. This is in the range of, I think, something like $10 to $30 million from the United States as we stick to U.N. formulas for the foreseeable future, the next several years.

The agency, the area office, is getting substitutes for toxicity, for safety. We are looking at a number of them. The chemical industry has put a lot of money into research, and began to do so as early as the late 1970s when the United States first banned aerosol uses of CFC. That is moving along well and we are reasonably confident about it.

Bill Rosenberg is not here this morning, but Mike Shapiro, his Deputy, is, and if you are interested, I would ask Mike to elaborate a little more.

Mr. **Traxler**. Not necessary. We appreciate that. Do that for the record.

Mr. **Reilly**. All right. Good.

[The information follows:]

INTERNATIONAL RESEARCH EFFORTS STRATOSPHERIC OZONE

The U.S. Environmental Protection Agency's (EPA) Stratospheric Ozone Research Program was organized to study the potential effects of increased levels of exposure to solar ultraviolet radiation in the 290-320 nm waveband (UV-B), and to evaluate engineering mitigation options to prevent stratospheric ozone depletion. A key challenge for EPA's Stratospheric Ozone Research Program is to target the available resources on those areas of scientific and engineering uncertainty that are most useful to policy makers in addressing this issue. This work will contribute to the success of the international Vienna Convention for the Protection of the Ozone Layer, to the subsequent Montreal Protocol, and to compliance with the conditions of the Clean Air Act.

For the conditions of the Protocol to be successful on a global scale, it is essential that the research be focused on areas that are relevant not only to the United States and other industrialized nations, but also to developing and newly industrialized countries. In response to these mandates, EPA has developed an assessment-oriented research program on stratospheric ozone depletion conducted by the Office of Research and Development (ORD). ORD's research program is designed to play a significant role in generating scientific information that is credible and persuasive to these important audiences. EPA will focus its research efforts on areas of primary importance to the mission of the Agency, building upon its own strengths and the strengths of other national and international organizations.

In the program, the highest priority is placed on areas of research that will provide scientific information relevant for decision making during the next decade. To further this goal, EPA has adopted a global rather than strictly national focus in establishing priorities. Therefore, this work will provide new insights in time for the international scientific assessment in 1994 prescribed by the Montreal Protocol on Substances that Deplete the Ozone Layer. Continued growth in the production and use of certain chlorofluorocarbon compounds (CFCs) and halons will result in a reduction in the concentration of stratospheric ozone. The results of EPA's research program also will be used to encourage broad international participation in limiting the production of substances likely to damage the ozone layer.

Even with an immediate phaseout of all CFCs and related compounds, current levels of chlorine loading in the atmosphere commit the world to an unavoidable decrease in stratospheric ozone well into the next century. Ecological and human health research, as well as UV-B measurements at the ground, must be pursued in order to develop adaptive strategies to the inevitable ozone decrease before potentially serious problems arise. As decided at the first meeting of the Conference of the Parties to the Vienna Convention (Helsinki, 26-28 April 1989) in Decision 4 (UNEP/OzL.Conv.1/5), "...the following activities shall be given priority in the research, observations and transfer of technology: ...(d) Research on the human health and biological implications of ultra-violet radiation changes at the earth's surface. Particular attention must be given to the impact on food production in the developing world and to development of crop varieties resistant to higher levels of ultraviolet radiation;..."

A goal of the EPA's Stratospheric Ozone Research Program is to understand the human health and biological implications of ultraviolet radiation changes at the earth's surface. Particular attention will be given to the impact on food production in the developing world and to the development of crop varieties resistant to higher levels of ultraviolet radiation. Research topics to be covered are (1) human health, (2) wetland rice ecosystems, (3) marine ecosystems, (4) air quality, and (5) engineering mitigation.

EPA is also working with twelve chemical producers on a program to determine the potential environmental effects of alternative fluorocarbons and their degradation products. The Alternative Fluorocarbons Environmental Acceptability Study (AFEAS) was initiated in December 1988 to assess the potential impact of CFC alternatives on the environment and to identify gaps in knowledge. The results were presented at the United Nations Environment Programme (UNEP) meeting in Nairobi in August 1989, and were incorporated as an appendix to the Scientific Assessment of Stratospheric Ozone: 1989 (WMO Report No. 20), under the Montreal Protocol on Substances that Deplete the Ozone Layer.

Mr. **Traxler.** We are going to move along this morning. We have had to abbreviate the hearing, and I am very grateful for your presence here today. So we will do some submissions for the record that we perhaps otherwise wouldn't.

WETLANDS

Turning to the issue of wetlands, which is a Nation-wide concern, and it is probably one of the most controversial environmental programs.

You recently had some discussions with the Corp of Engineers regarding wetlands policy, known as the "No Net Loss" program, and briefly, could you tell us what the position of the EPA was, and could you briefly characterize what the view of the Corp was, and how those were melded and the context of the resulting program?

Mr. **Reilly.** Well, the EPA and the Corp of Engineers have had responsibility together for administering Section 404 of the Clean Water Act as it affects wetlands. We have been moving in recent years to try to get guidance with respect to definition and delineation of area jurisdiction, so that they are the same.

The regulated community has for a long time expressed the concern that one of the last expectations they have of the government as it approaches a resource like this is to speak with one voice. It was with that in mind that we entered into negotiations shortly after we took office with the Corps to try to get a precisely similar policy on sequencing and on mitigation.

WETLAND DEVELOPMENT

Sequencing essentially is the practice that we follow whereby we ask the question first: can wetlands be avoided, and is there another way to fulfill the developers' project wishes, plans, and objectives without taking the wetland?

If the conclusion is that we must condone the development of a wetland, we then require a minimization of adverse impacts in the plan and developing of the wetland, and finally, mitigation.

We did, in fact, achieve an agreement with the Corps of Engineers on these. We have now the same guidance, going to all of their districts and all of our regions. I think it is a great step forward and should significantly strengthen our wetlands conservation effort in this country.

There was, as you suggested, a good deal of controversy about it and I received letters from other members of Congress recently, particularly stimulated by the farm community. I think there is a good deal of misunderstanding of what, in fact, we are doing, and the rigidity with which it is believed we may exercise these responsibilities.

WETLAND JURISDICTION

One issue that has been raised has to do with how broadly we interpret our jurisdiction to affect areas that have not previously been regarded as wetlands. We are trying to clarify for everyone that a wetland in our view has a number of characteristics: the land has to be periodically inundated, has to be capable of supporting vegetation that is associated with wetlands and hybrid soils and has to have hydric soils themselves present.

Any one of those three categories is not necessarily controlling. If you apply that and if you also exempt the normal farming practices, which we do through normal regulations under this statute, then I think you go a long way toward reassuring people that the traditional uses they have been making of their land in the agricultural community will not be interfered with by the exercise of our authority.

NO-NET-LOSS

We recognize, however, that this agreement between the Corps, and it is a gloss on existing law, is not new policy: it is really intended to implement an existing policy, and going to require significantly more than this agreement to implement a No-Net Loss Policy. This is not the No-Net Loss Policy that the President promised in his campaign and has committed to again since.

We are working on that through the Domestic Policy Council and hope to strengthen our wetlands protection in other areas, most notably in the farm bill with the conservation reserve program and a closer targeting of some of the—support of the payments that are made through that program to try to ensure that wetlands, areas adjoining surface waters, areas that surround the wellheads and the sources of that sort, get priority attention.

So this is part of that package. It is moving in the right direction. I think if those that were concerned about how EPA and the Corps implement their wetland responsibilities got more extensively exposed to it and involved with it, and particularly with the way the EPA has in the past administered its responsibilities using a sequencing approach, they would be reassured.

THREAT OF WETLAND POLICY

Mr. GREEN. I have had them approach me, I guess, because I am on this subcommittee, and, of course, they don't want to end the wetlands but they do want to change its use. I guess it is more narrowly a monoculture after they use it as compared with what was there before, and they seem to feel threatened by where you are going.

Could you comment on that?

Mr. REILLY. There are two reasons why I think that a farmer would feel threatened by these policies, which have not significantly changed with respect to them in recent years.

One is if you propose to develop and bring into production an area of wetland. For example, if you fill in a bottom land hardwood forest, an area that has not previously been in danger, that is, in fact, a classified wetland; you might find that practice is not permissible.

We have legislation that makes you ineligible for a number of programs, supports through the commodity support program, from the agriculture department, if you do that, if you bring into production an existing wetland.

The second area of concern has to do with the development ability, the possibility of subdividing, constructing and developing, drilling, filling, all of that very often associated with Florida and South Canal-type, Venice-type developments. That, obviously, has an impact on the value of land.

CRANBERRY GROWERS

Mr. **Green**. I think the cranberry growers don't want that. Their operation is essentially a crop operation, so they are trying to develop the land and they are trying to prevent development nearby.

Mr. **Reilly**. In that case, they should have nothing to fear.

Mr. **Green**. They do change what is growing there.

Mr. **Traxler**. I think I could be of help here. I am not sure I can add any enlightenment here, but I think their issue is that there is a shift in the production from more traditional areas in the East Coast to other areas of the country. So what they are looking at is to develop cranberry crops, for instance, in Wisconsin, which seems sort of strange, but that is the developing alternative crop there, and by its nature, they are looking for some types of bottom lands or wet lands where the cranberry, of course, will thrive.

It is required that it have water, not moisture, but water. So I think what they are looking at is how can this industry, which requires literally wet lands for its production, how can it exist and grow in the face of the regulations. I think that is their trouble.

Mr. **Reilly**. Well, if I understand correctly the way that industry operates, I am familiar a little with it at Cape Cod. They more often add to our wetlands base than detract from it. And it is not clear to me, unless from the practical history that I am aware of that we have gotten in the way of any expansion. Have we?

Ms. **Wilcher**. If I may, there may be some cases in which we have historically added wetlands. I think that would occur when you would actually flood the land so that it would become a wetland and support the type of plants that typically grew there.

That kind of falls under the same umbrella as constructing rice levees to flood the land, and we are looking at that because in the wetlands program, we really want to do things that make sense.

And we just sent a letter last week to Senator Leahy and 11 other Senators clarifying that we at EPA and the Corps of Engineers, Bob Page and I by signing this letter, would be considering the construction of normal sized rice levees to be normal farming activities that would be exempted from the 404 program. And it may be that some of the concerns that the cranberry growers have could be alleviated by a similar letter from us.

So if you would like for us to follow up on that with you, we would be happy to do that.

Mr. **Green**. I think it would be helpful.

Mr. **Traxler**. Okay.

WATER RESEARCH AND DEVELOPMENT

Turning to water research and development, you are asking for a total of $28,865,000 in 1991, which is an increase, of course, of some $2,100,000 over 1990's appropriation.

Your Science Advisory Board looked at the agency's research programs in water, and they thought that generally, the direction of the increases within the water medium was done fairly well.

They did take some exception, rather strong exception, to the amount that was allocated to nonpoint source pollution control research, and they felt perhaps that the agency has not been as attentive to that problem as they ought to be in terms of research dollars, and as we well appreciate, over 60 percent of the degradation of our surface quality water is a result of nonpoint source. It contributes significantly to water pollution.

What are your plans in the coming fiscal year to alleviate some of those concerns?

Mr. **Reilly**. Well, I will have a first crack at that and then invite Erich or LaJuana to add.

As I made clear yesterday, I attach a very high priority to the control of nonpoint source pollution. I think it is one of the major areas of disappointment, of failure of our water quality effort in the United States.

We have spent some $50 million at the Federal level in treating waste. State and local governments have spent more. We haven't done anything like a comparable effort in the area of nonpoint source control, and there are, I think, enormous opportunities if we do for improvement of surface waters all across this country.

NONPOINT SOURCE

Our authority to do that has been, as you know, somewhat limited. It was strengthened more recently by amendments to the Water Quality Act. I would respectfully come to the conclusion that we need more research on nonpoint source control.

I, frankly, would put my emphasis very much, however, on practical efforts that have been successful in expanding information and replicating themselves. We have had very good experience in the Susquehanna Valley, in Pennsylvania, with farming practices that have contributed to the reduction of the loadings in the Chesapeake Bay.

We have some other success stories in various other parts of the country from nonpoint source. To the extent that research can strengthen those efforts, I would be very sympathetic to it, but I think that willingness on the part of states and localities to undertake the kind of controls, plans, and management of resources necessary is perhaps more likely to take off for us.

Erich, do you want to add to that?

Mr. **Bretthauer**. There are a few research issues that, obviously, could be addressed.

It is our view, though, that we could get the most significant benefit by simply adhering to some of the policies, some of the practices that are already reasonably well-known. There are areas of research, though, that certainly would complement our total understanding of the nonpoint source problem.

We have simply not viewed them as a high priority as some of the other research that we are proposing at this time, given the fact that there is a lot that we could do in the absence of——

NONPOINT SOURCE ALLOCATION

Mr. **Traxler**. How much are you allocating in 1991 for this research?

Mr. BRETTHAUER. We have no particular item in our budget for nonpoint source research. We have some programs that contribute to our understanding, but we have no focus program in nonpoint source.

Mr. TRAXLER. But you know, the fact of the matter is that your Science Advisory Board feels very strongly that you ought to have provided more funding, and was quite critical of the agency for not doing that. So who is right?

Mr. BRETTHAUER. Well, we are revisiting that issue and developing our 1992 budget at the present time. So I think we will probably be proposing some initiative in respect to our 1992 submission.

Mr. TRAXLER. What should we do in 1991?

Mr. HABICHT. I would say, if I might just add a thought on it from a management standpoint, during the course of the last several months and certainly over the course of the next year, we are going to be paying increasing attention to ecological systems, both in research and in program activity such as the Chesapeake Bay, Great Lakes, areas that Bill Reilly has indicated as priority areas, both understanding them better and developing multimedia strategies.

Nonpoint sources have emerged, as well as air toxic deposition, nonpoint source has emerged as a major source of the problem.

So I would say that in 1991 in areas of using this expanded research grant line item that we have, over $12 million for university grants, ecological risk assessment, environmental monitoring assessment of the program, and pollution prevention, although nonpoint sources have been always one of the candidates for usage of money, I think based on priorities the Administrator has placed on it, we would be looking to activities that would focus on nonpoint sources there, right away, in 1990 and 1991.

OTHER AGENCIES AND NONPOINT SOURCE

Mr. REILLY. I have just been reminded, we are exploring with the Department of Interior a demonstration project on public lands using nonpoint source controls.

Ms. WILCHER. I might just add that I have been meeting with the Departments of Interior and Agriculture regularly, and USGS and NOAA to a certain degree, and we are trying to coordinate our nonpoint source efforts. We do see it as the water pollution issue of the 1990s, and it is something that is very important to us from a programmatic standpoint.

While research is important, I will be a little bit biased here and say that we really do want to do just what Bill said, and that is develop technologies and understand the best technologies for preventing nonpoint source pollution and get those technologies out in the field, get those technologies developed.

We know it is a problem and there needs to be a certain amount of quantification of the problem and a certain amount of monitoring assessment. But we are very anxious to move forward on that now.

STATE GRANTS

Mr. **Traxler**. Turning to page 3-53, the justification details the nonpoint source program. The committee directed the agency to develop a state by state planning target for 1990 funding based on interim criteria which reflect nonpoint source needs. We also indicated that those criteria should be based on nonpoint source problems, including the Section 305(b) report, population, cropland acreage, pasture rangeland forest acreage, wellhead protection areas and so forth. We indicated the agency should seek state grant applications no later than January 16, 1990.

Finally, we requested that the nonpoint source program grant awards should be made to the states with approved programs no later than March 1, 1990, in accordance with the agency's December 1987 nonpoint source guidance.

The question is, have you met those directions?

Ms. **Wilcher**. We are close. Fifty-four states and territories submitted applications out of a total of 57 that had approved programs, either completely approved or partially approved and we went ahead, and said that if we wanted to submit an application, even though they were partially approved, we would let them do that.

The awards of those 54, 41 have been made, and we are still negotiating with the other states. We expect to have those done sometime in the very near future.

We made awards based upon the factors that you had set out in the appropriations language, and did a couple of other things that I thought was really helpful. One thing was allow the bonus for states, and we selected 12 states that had done a particularly good job in nonpoint source planning, both in terms of timeliness and in terms of the quality of the programs.

Four states received $250,000 extra, and eight states an extra $110,000, just as an incentive to recognize those states that had come in early with the programs and such.

So we have funded 41 states. We expect to have the others completed sometime very soon.

Mr. **Traxler**. We mentioned earlier that everyone agrees that the nonpoint source pollution is a primary cause of pollution in our lakes, rivers and streams and about 45 percent in the estuaries in this Nation. Still your 1991 budget proposes a reduction of $23.5 million from the levels provided last year, and the question is, how much did you ask OMB for nonpoint source pollution?

Mr. **Grizzle**. We asked for $15 million.

Mr. **Traxler**. All right.

Mr. **Grizzle**. Small victories.

Mr. **Traxler**. Are we looking to the states to pick up the tab in this effort? Is that the bottom line and the direction the agency is going?

RESPONSIBILITY FOR NONPOINT SOURCE

Mr. **Reilly**. Well, I think, bearing in mind the kinds of interventions that are necessary to get a grip on this problem, the largest part of the burden will, in fact, fall on, if not states, on those entities within them that are responsible for managing land, for regulating land use.

It's not a function that we have or want at EPA. However, it's necessary to provide protection along streams, create buffer zones, influence agricultural practices and development practices, forestry, construction, things of that sort.

So I think inevitably the major responsibility will fall on other levels of government, but we are in a particularly good position to influence their choices and priorities, and particularly to clarify for jurisdictions the kinds of interventions that have been found successful.

That, I think, is an important role for us and to encourage innovative efforts such as the ones that we have rewarded with those bonuses.

Mr. **Traxler**. In President Bush's "Rebuild America" infrastructure program, I hope this has a very high priority on his list of good works to be done. It would be an incredible challenge for the Nation and we would all feel better for it.

It would only take a couple of B2s.

Mr. **Reilly**. I might say that I detect, I think there has been a change in attitude on the part certainly of people in some parts of the country with respect to this problem.

There was a great resistance to addressing it throughout the 1970s, and increasingly, whether you look at—well, virtually any surface water that we continue to have problems with, there is no real prospect for doing something very significant about it if good nonpoint source controls are not included.

We have ample evidence of that. We have a lot more of a story to tell that has—of programs that have been effective and have been found politically acceptable in various parts of the country.

So I think the prospect of moving on this, as LuJuana suggested in the 1990s, is better than it's ever been.

Mr. **Traxler**. Turning to Page 3-36, you are asking for no funds for the "Clean Lakes" program. The question is, did you request any funds for the program from OMB in your submissions?

Mr. **Reilly**. No. We view that as subsumed by some of the other increases that we have in the water quality area.

Mr. **Traxler**. How many applications did you receive in fiscal year 1989 for the program, and how many were funded?

Mr. **Reilly**. Clean Lakes program?

Mr. **Traxler**. Yes.

If you don't have it, submit it for the record.

Mr. **Reilly**. Fine. I will do that.

[The information follows:]

1989 Clean Lakes Program—Applications and Funding

The Agency received a total of 128 applications for Clean Lakes funding in fiscal year 1989. Of the 128 applications received, 98 were funded.

Mr. **Traxler**. How many requests do you anticipate in fiscal year 1990, and with the monies that were made available, how many of those do you anticipate you will be funding?

[The information follows:]

1990 CLEAN LAKES PROGRAM

The Agency received a total of 130 applications for Clean Lakes funding in fiscal year 1990. Of the 130 applications received, we expect to fund about 100.

The Agency requested no funding for the Clean Lakes Program for fiscal year 1991.

DRINKING WATER

Mr. **TRAXLER**. Turning to drinking water, the 1991 request for drinking water program is $132,637,000. Of that, $10,877,000 is dedicated to research and development.

We note that your science advisory folks tell you that drinking water received less than an adequate increase of only one million dollars. The Board's drinking water subcommittee expressed concern that cuts had been made in research on alternative disinfection methods.

What is your thought on that comment by your advisory panel? Shouldn't we allocate more resources to funding drinking water R&D?

Mr. **REILLY**. We certainly are allocating more resources to drinking water overall, as we and the States get ready for the new requirements related to testing for and then eliminating lead in drinking water and the microbiological monitoring that is going to be required that we imposed present substantial responsibilities on water providers.

Erich, are you prepared to comment on the research related to drinking water?

Mr. **BRETTHAUER**. I believe that we should dedicate more research to problems of drinking water. We are putting together a proposal which will be submitted in preparation of our 1992 budget submittal at the present time addressing some of those concerns.

Mr. **TRAXLER**. You know, I find it interesting that you are working on the 1992 budget at this time.

Mr. **REILLY**. So do I. Three at a time.

Mr. **TRAXLER**. Three at a time.

Mr. **GREEN**. Mr. Chairman?

Mr. **TRAXLER**. Bill.

NEW YORK CITY WATER

Mr. **GREEN**. I met recently with our New York City water supply people, and they have had a long history of being regarded as real professionals in this field, and they left me with a sense that they felt you were really going in the wrong direction on drinking water, that you seem to be going heavily towards treatment.

They thought that the indicia used to measure water quality were perhaps not really accurate in terms of the health quality of the water, and that they really wanted to have more of the efforts directed towards the nonpoint source issue, which obviously does affect the origins of the New York City drinking water as development comes to those ex-urban areas.

And I was wondering if you care to comment on that, either now or for the record?

Mr. **REILLY**. I will be glad to comment for the record.

I am not familiar with their criticisms but will become so.

[The information follows:]

Drinking Water Efforts

EPA's Surface Water Treatment Rule does not place specific requirements on a given water supply. This rule establishes criteria under which a state would determine which systems must install filtration. One of the criteria is watershed control, so that success or failure in controlling sources of contamination in the watershed must be considered by the State of New York if New York City wishes to avoid filtration. EPA strongly encourages watershed controls even when a water supply is filtered. Controls add a margin of safety to water quality in the overall water treatment and delivery system.

Federal requirements are implemented through the state. At a state's discretion, more stringent requirements than those designated in the federal regulation may be imposed. Thus, a state may mandate filtration without regard to watershed controls.

New York City feels it will have no difficulty with meeting EPA's criteria in order to avoid filtration. It appears their criticism is with New York State's forthcoming regulations (proposal expected in July) requiring all surface water supplies to provide filtration by the year 2005. The City believes that filtration is unnecessary because health risks can be met through disinfection and watershed protection programs.

Mr. Green. Thank you.

Mrs. Boggs. Mr. Chairman, may I ask a question on drinking water?

Mr. Traxler. Yes.

NATIONAL RURAL WATER ASSOCIATION

Mrs. Boggs. I note on page 4-30 that a million dollars is being requested for special studies and demonstrations. This program in the past has supported the efforts of the National Rural Water Association.

The request for fiscal year 1991 is a decrease of approximately $3.4 million due to the agency's expectation that additional funding will be raised by organization dues, training fees, et cetera.

Particularly in the light of their plans for expansion into 48 states, has the National Rural Water Association indicated that it can meet its expenses through increased fees and dues?

Mr. Reilly. Do you have any knowledge of that, LuJuana?

Ms. Wilcher. That organization, of course, would be interested in getting more funding, and so they have not, at this time, indicated that they could do that.

Mrs. Boggs. Well, we go through this every year. We have to put rural water back in every single year, so I just wanted to know what had happened.

Mr. Traxler. Jerry has a question.

Mr. Habicht. If I might, Mr. Chairman, there was the additional money for Rural Water Association, there was a grant that may have been acted on or just about to be acted on for Rural Water Association with the 1990 money; so we are looking forward to that.

Ms. Wilcher. We do obligate the money every year that you give us.

Mr. Traxler. Excuse me, you do what?

Ms. Wilcher. We obligate, we give the money to them every year. We are pleased to do that.

Mr. Traxler. We will just finish.

Jerry, do you have a question on this point?

Mr. Lewis. Not on her precise point but certainly on a few others.

Mr. Traxler. Let me just ask two questions on this and come to you.

First, we need to know what the authorized level of funding for technical assistance of small public water systems is? You can put that in the record.

Second, can you tell us what your request to OMB was on this?

Ms. Wilcher. We will provide it.

[The information follows:]

Technical Assistance Funding for Small Public Water Systems

The authorized level of funding for technical assistance to small public water systems lies in Safe Drinking Water Act's (SDWA) general authority for EPA "to make grants to and enter into contracts with, any . . . organization [to] pay . . . costs . . . of any project or activity . . . designed . . . to develop and expand the capability of programs of states and municipalities to carry out the purposes of this title [SDWA, or Title 14 of the PHS Act] . . ." (Section 1442(b)(3)). The authorization is Section 1442(f), which specifies $38,020,000 for FY 1991.

EPA's FY 1991 budget request to OMB asked for $1 million to help support the National Rural Water Association (NRWA) and Rural Community Assistance Projects (RCAPs). We believe efforts to promote voluntary compliance and self-policing among water systems and efforts to give systems the knowledge and skills to help themselves are well worthwhile and cost-effective. Indeed, it is the only feasible means to cope with nearly 200,000 public water systems nationwide. The NRWA and the RCAPs are two important tools to this end but not the only tools. EPA is promoting the mobilization of other parties, including the American Water Works Association, the National Council of State Legislatures, the National Manufactured Housing Association, various educational-support associations and the Association of State Drinking Water Administrators.

Mr. Traxler. And then we will be able to ferret out who is making the cuts here, who the good guys are.

We have a sense that there is a certain amount of gamesmanship in these sort of things where it's to the advantage of the budget makers to forget those items and trust and believe that the good judgment of Congress will prevail.

Mrs. Boggs. Leave it to us big city representatives to do it for them.

Mr. Traxler. Well, Mr. Green is very sympathetic to rural water, always has been.

Jerry?

Mr. Lewis. Thank you, Mr. Chairman.

Bill Reilly, it's a pleasure to be here with you and your helpmates. Yours is a very, very important area of Federal responsibility, and I want to commend you for the kind of mood and atmosphere out there that you have distinctly.

SALINIZATION

The combination of nonpoint source pollution and drinking water causes me to want to just bring to your attention an item that I was intending to raise here because we are just beginning to talk with the regional people about it.

It's of prime importance, and I think it's appropriate because of the discussion.

Years ago Pat Brown, Jerry Brown's father, was instrumental in putting together a major project in California that involved flood control and water. It involved the supply of drinking water beginning with rivers in Northern California and went back all through our state.

An incredible manmade system now exists that has made a big, big difference. The controversies that surrounded that development, first flood control in the north and second water delivery in Los Angeles, have been very difficult.

And the legal implications are obvious to anyone familiar with the subject area.

Recently, I believe your agency is starting to ask some questions relative to the flows of waters into San Francisco Bay, and the question of salinization and pollution in the Bay.

After the fact, if one comes in and starts to try to undo the whole process, it might dramatically impact, in an unintended way, the whole agreement. You indicated that we are not into controlling the population by way of water questions. Nevertheless, federal action could significantly impact the drinking water supply in Southern California.

I would urge the agency at the Federal level to be very sensitive to our concerns about the work that has been done on a regional, but especially a statewide basis, regarding that confluence of a very difficult problem.

Mr. **Reilly**. All right, sir.

Mr. **Lewis**. Other than that, there is no question, Mr. Chairman, or at least at this point.

CORRECTIVE ACTION AT CONTAMINATED SITES

Mr. **Traxler**. Any time Jerry.

You may have already had this question from our friends on the Senate side, but we need to know whether or not your own estimates suggest that 60 to 70 percent of the 5,700 hazardous waste land disposal, storage and treatment facilities may require corrective action to clean up the contamination at perhaps a cost of at least $10 billion.

Is that a correct estimate and a number that rings correct?

Mr. **Reilly**. Let me introduce Don Clay, who is at the table today, the Assistant Administrator for Solid Waste and Emergency Response.

Mr. **Clay**. There have been numbers that high. We are taking a hard look at how we can do something to help reduce that cost.

But the out-year cost, is a big problem. The number of corrective action facilities would be potentially three times the number of Superfund sites. But it will not necessarily flow automatically.

Mr. **Traxler**. Do we have any estimates as to what the cost could be on all of these sites, the total cost?

Mr. **Clay**. We will provide that information for the record.

[The information follows:]

Estimated Costs of Corrective Action Site Cleanups

Based on a study conducted by Agency staff in the summer of 1989, it was estimated that as many as 4,500 RCRA facilities coud require corrective action. Assuming that states would handle about 50 percent of the oversight workload, the Agency estimated the Federal cost to be approximately $2 billion (in FY 1991 dollars) for the 22 to 45 years it would take to address these facilities. States would have comparable costs. The largest cost would be borne by the facility owner/operators but, we do not have enough historical data to compile valid estimates. However, if their costs prove to be similar to the owner/operators in the Superfund program, they would pay somewhere in the $50-$100 billion range.

Mr. **Traxler**. We note that the GAO has suggested that the effort to clean up hazardous waste sites could exceed the magnitude of the Superfund program. GAO also indicated that over 400 facilities may have to be transferred to the Superfund program for cleanup because the facility operator will be either unwilling or unable to pay for the cleanup of those sites.

Do you agree with the GAO on that point? Do you think that is a correct statement?

Mr. **Clay**. We work closely with GAO, but I think in general, they are right. I mean, when people are closing down a facility, it is very hard to get them to clean it up because their financial situation is usually poor—they don't want to stay. They want to close and go away, and they are very difficult to work with.

The exact numbers I would like a chance to go back and look at, but in general, it is three to four times bigger than the number of Superfund sites.

STATES ROLE IN CORRECTIVE ACTION

Mr. **Traxler**. Last year, you told the subcommittee that 17 states would be authorized to administer the corrective action program by the end of 1989. I believe that as of February, only four states have this authorization.

Why the difference between your estimate and the reality?

Mr. **Clay**. The reality now is closer to five. It's still a way to go. The corrective action program is a very difficult program for the states to step up. It's one that is very expensive for the states to assume.

The states are going very slowly and so again, we are looking at that as part of our RCRA instrumentation study. We are going back and looking at the whole system. But they are reluctant to step up and assume the program.

Mr. **Traxler**. Given the slowness on the part of the states of picking up this effort, and given the fact that the Agency intends only to "encourage" the states to assume the lead, when do you expect the clean-up to be initiated at all facilities requiring clean-up, and when will clean-up actions be completed at those facilities?

Can you give us some rough idea of that?

Mr. **Clay**. I would rather not at this time. It's one of the things that we are looking at and haven't had a chance to be briefed yet. But we are looking at some options in the eight-to 10-year time frame.

But again, I would rather provide that to you for the record. It's clearly a big problem.

[The information follows:]

Timeframe for RCRA Cleanup

While the number of states which have formally taken on the RCRA corrective action program remains below expectations, some states are working with the Agency on corrective action under a cooperative arrangement; a less formal way to participate in the program. Thus, our expectation that states will conduct about 50 percent of corrective action oversight remains valid.

The amount of time it takes to initiate and complete the corrective actions at all RCRA facilities is a function of the universe of facilities requiring corrective action, the number of facilities which the Agency can start per year, and the length of time from start to completion at a facility. The Agency estimates that the low end of the corrective action facility universe range is 3,500 facilities. Assuming 200 starts per year, it would take about 17 years to address these facilities. The high end of the range is 4,500 sites. Assuming 100 starts per year, it would take 45 years to address these facilities. By comparison, the Superfund program has a universe of about 1,200 National Priorities List sites and has started about 100 sites each year. The estimated average duration of corrective action at a RCRA facility is about six years.

As part of the RCRA Implementation Study, which is nearing completion, the Agency is looking at options to give priority to emergency actions and control of releases in the near term (eight to ten years). This involves the use of interim measures to make facilities safe and stable before undertaking the long-term cleanup.

Mr. TRAXLER. It clearly is going to be very expensive.

Mr. CLAY. We are trying to make it so it's less expensive. We are looking at a prioritization scheme to make sure that we address the worst facilities first, but it's capable of eating the EPA, the states, and everybody up. It's just a mammoth program.

And we are looking at alternative ways to address this, but we really do not have the answer yet.

RESEARCH INTO CORRECTIVE ACTION

Mr. TRAXLER. What kind of research are we doing in this area?

Mr. CLAY. One of the things we are doing is a fair amount of research. RCRA generally started out without an adequate research base. If you look at the traditional EPA programs, they had monitoring and they had techniques. But in solid and hazardous waste, we started out writing rules, and never really went back to get the research base.

So we are now looking at what is the nature of the problem, particularly the whole medium in groundwater which has been a very difficult area to deal with, but we don't have the research base there that we have in the other traditional programs in the Agency.

Mr. TRAXLER. Can you give us a dollar number as to what you may be spending at this time?

Mr. CLAY. I will provide that for the record.

[The information follows:]

RCRA RESEARCH FUNDING—RESEARCH TO SUPPORT CORRECTIVE ACTION

The Environmental Protection Agency conducts research to improve the nation's ability to take corrective action under the Resource Conservation and Recovery Act (RCRA) in several major areas:

1. The alternative technology program has develop/evaluated technologies to treat hazardous waste. These same technologies will, in most cases, be suitable for use in corrective actions.
2. The waste characterization program has developed models to predict the transport and fate of hazardous waste in groundwater. These models can be used to define groundwater problems and to help in the design cleanup techniques. The waste characterization program has also developed information on health effects. Risk assessment methods are being developed and tested. These methods will be useful to conduct site-specific risk assessments for design of corrective action programs.
3. The waste identification program has developed both laboratory and field testing methods to measure hazardous wastes. These methods will be useful in identifying the type of wastes at sites needing corrective action.
4. The land disposal program has developed information on the optimal design of landfill liners and covers and leachate collection and treatment systems. If landfills

are a part of corrective actions, this information will be useful for designing new landfills.

5. The incineration program has developed information for the safe destruction of hazardous wastes. This information will be useful to determine how to destroy wastes as part of corrective actions.

The fiscal year 1991 resources for the above five research areas are:

Total (R&D & S&F) fiscal year 1991 resource request

Research area:	*Millions*
Alternative Technology	$7.7
Waste Characterization	9.4
Waste Identification	6.6
and Disposal	0.9
Incineration	3.6
Total	28.2

In addition to the RCRA hazardous waste research described above, the research and development being conducted to support the Superfund program will also be useful for RCRA Corrective Actions. From a scientific and technological perspective, there is no significant difference between a Superfund cleanup and a RCRA Corective Action. Therefore, roughly $47 million of the scientific and engineering information from the Superfund research program will be useful. The major challenge is to review, evaluate, and modify this research information to make it useful to corrective action decision makers.

Mr. **Traxler**. Thank you.

How many of these facilities are going to be transferred to Superfund for clean-up, and give us some reasons for the transfer?

Mr. **Clay**. We will be pleased to provide that for the record.

[The information follows:]

Transfer of Facilities to Superfund

The primary reason for transferring RCRA facilities to Superfund is that the owner/operator is bankrupt or otherwise financially unable to pay the cost of corrective action at the facility. The Agency has not estimated how may RCRA facilities might fall into this category. Over the last two years, the Agency has added seven RCRA sites to the National Priorities List becasue of bankruptcy or unwillingness to pay based on financial inability. However, it is difficult to predict future trends since relatively few RCRA facilities have yet had to face the expensive later stages of corrective action.

PESTICIDE RE-REGISTRATION FEES

Mr. **Traxler**. Okay.

Turning to pesticides, the President's fiscal year 1991 budget includes 14 million from user fees to offset EPA's costs incurred in registering new pesticides. EPA had established similar fees by regulation in May of 1988. But in October of 1988, Congress suspended the fees when it enacted amendments to the FIFRA, which included fees to expedite re-registration of existing pesticides.

We understand that the existing fees were expected to raise about $160 million over nine years. However, the agency estimates that it will raise only about $153 million at best.

If you receive less than projected amounts for FIFRA fees, how far behind will that put the agency in re-registering all older pesticides?

Mr. **Reilly**. We will hope to re-visit some of those issues and in particular to ask that the current cap on collectability of those fees be removed.

Linda Fisher, who is the Assistant Administrator for Pesticides and Toxic Substances has now joined us at the table, and I will ask her to expand on that.

Ms. **Fisher**. Congressman, a major portion of the fee was assessed on a per product basis and on an active ingredient chemical basis.

As companies had to face the choice of paying a fee for not reregistering their product, some of them just dropped their products out of the system. They either had stopped manufacturing them or weren't selling enough of them to warrant paying the fee.

So the original product base that we calculated the fee revenue generation from has changed significantly.

We sent a letter to the Members of the House Agriculture Committee and the Senate Agriculture Committee advising them of the shortfall and recommended that they remove a cap that is in FIFRA, a cap above which companies can't be assessed a fee once they hit a ceiling.

Companies thought they might, on a per product basis, have to pay a higher fee. However, the cap cut them off. We recommended that the Congress lift those caps.

In the interim, we re-calculated the fees we originally imposed on companies and raised them. For instance, the maintenance fee was $425 last year on a per product basis. This year it will be, I think, approximately $1200 per product.

So we are trying to make up the difference by adjusting the fees on a per product basis, and we have also asked for a change in the legislation to allow us to generate a greater revenue by removing the caps.

Mr. **Traxler**. What is your current estimate as to the cost of reregistering pesticides within the nine years envisioned in the FIFRA Act?

Ms. **Fisher**. We are now in the process of reevaluating the actual cost. The agency calculated in 1988 what it thought re-registeration would cost. We looked at the number of chemical cases we thought would go through the system, that the agency would have to act on, and costed out the technical requirements at that time.

Because the program in a sense has changed so much with chemical products dropping out, and with new testing requirements being imposed on companies, we think the dynamics have changed somewhat.

And I would ask the pesticide staff to go back and scrub all the numbers and be sure that our calculations that we made two years ago, in fact, are going to hold up now.

Mr. **Traxler**. We need that number, so if you could supply that to us, please.

Ms. **Fisher**. Yes. Actually, it should be ready in the next couple of weeks.

[The information follows:]

COST OF PESTICIDE REREGISTRATION

The Agency is engaged in a detailed recosting of the reregistration program. In general, our initial estimates were low. We will provide the Committee with our revised estimates as soon as our costing exercise is completed.

Mr. **Habicht**. I might just add a footnote, that while we are assessing the out-year costs of the program over the next three months, we will be getting much better data about the level of revenues coming in so that by the summer we will be able to calculate whether or not the revenue stream is even close to meeting the needs.

And we will want to talk to you in more detail about it.

Mr. **Traxler**. Excellent. Appreciate that.

RE-REGISTRATION PERSONNEL

A columnist wrote a piece on pesticide re-testing, and he suggested that an internal EPA memo stated that 100 people hired to tackle the job of re-registration weren't devoting their time to re-registering but rather working on new registration; what about that? Was he correct?

Ms. **Fisher**. No. I think what the article raised an issue about was whether we hired the right people for re-registration and put them in the right positions.

I think one of the issues that people have questioned the program on, is when we set about to do FIFRA 1988, the re-registration of old pesticides, we needed to do quite a lot of housekeeping, by reviewing all the data we had on hand for the old chemicals, developing a data system to keep track of each chemical, and evaluate what tests have been received by the agency and what still were outstanding.

And quite honestly, we have spent the past year doing a lot of just plain housekeeping to catch up and figure out exactly where we were in re-registration before we moved through the process.

Some people have criticized that as unnecessary expenditure. I think it reflects good management to tackle this project in preparation for full implementation..

Some of the criticism has been aimed at us for not hiring enough scientists right away to review this mountain of new data that is going to come into the agency.

As we move into the next year of FIFRA 1988, we will be hiring additional scientists. So it was a matter of where do you want to put the first people that you get on board?

We put them into improving the management system to handle the program.

FUNDING FOR RADON PROGRAMS

Mr. **Traxler**. Our conference report for 1990 added $4 million for radon programs, including $2 million for mitigation training, $1 million for state radon grants, and $1 million for school surveys.

Also, pay attention Mrs. Boggs, $100,000 was intended for training women and minority contractors.

Does the 1990 radon program include the funding that was added by our committees and is it being spent in accordance with the instructions of the conference report?

In other words, are you doing what we told you to do?

Ms. **Fisher**. Is that for radon or for asbestos?

Mr. **Traxler**. Radon.

Mr. **Reilly**. Yes.

Mr. **Traxler**. Well, that is a good answer.

Mrs. **Boggs**. If yes, how?

Mr. **Traxler**. To all of the above, yes?

Mr. **Reilly**. The Radon Abatement Act endorsed the Agency's existing program and added resources for school survey and mitigation activities. We have identified options, and will begin implementing the National School Survey late this year, and will have obligated the remaining funds by August of 1990.

I don't have it here, but I recall that we have, in fact, entered into a contract with the minority contractors entity and that that is going forward, as well.

I believe it had some sessions in Atlanta. One already, I think, two or three scheduled, that will involve improving the capacity of the community, to advise on radon and mitigation.

Mr. **Habicht**. The other category of the $1 million, indoor radon grants, all that money has already been obligated, the state grants for mitigation activities.

Mrs. **Boggs**. Has the hundred thousand dollars for the training of women and minorities?

Mr. **Grizzle**. Yes, ma'am, that is moving forward.

As a point of further clarification, Mr. Chairman, I think we should point out that we believe we are following the appropriation guidance in 1990, but it's not a part of the 1991 request.

LEAD BASED PAINT

Mr. **Traxler**. Oh, that is a good answer.

Turning to the multimedia section of the budget for a minute, I have a question about lead-based paint. You remember that the subcommittee has been making an effort over the past year to bring some focus to the issue of lead-based paint. We set an April 1 deadline for guidelines and then slightly relaxed that timing in a letter that went to HUD recently.

However, EPA will ultimately have the responsibility over the training, and we suspect will need additional money in 1991.

Is that a correct assumption?

Mr. **Reilly**. Well, we have entered into a memorandum of understanding with HUD on ways to address the lead-based paint problem. We have seen our role primarily as drawing on our experience with asbestos and with other programs to provide technical advice and assistance to HUD.

In terms of a specific adequacy of the funds that we have, I think that we would regard those as sufficient.

Mr. **Traxler**. Do you think your dollar needs in 1991 will be the same as in 1990 then?

Mr. **Reilly**. I would not expect that they would be any more, but I will——

Mr. **Green**. Is that current number five million?

Ms. **Fisher**. Congressman, we took——

Mr. **Reilly**. Four million.

Ms. **Fisher**. We took the add-on that you gave us, which kind of came late. I mean, we didn't know we were going to have it until the Congress appropriated the money, and we budgeted to spend it out actually over the next two years to develop our training programs with HUD, work with them to evaluate effectiveness of in-place management and abatement.

We developed a spending plan for the five million dollar add-on, two of which came to my office, three of which went to R&D.

As we are going through our 1992 budget analysis, we will be contemplating whether we need additional money in 1992 to compliment what we hope to accomplish with the money you gave us for FY 1990.

So that is how you see it budgeted.

Mr. TRAXLER. Tell me what the total is, including the add-ons, that the committee provided for lead-based paint in 1990?

How much did we make available to you?

Ms. FISHER. Within my program, we have about $600,000 of our own money. You added to my office two million dollars of our five million.

Erich, I don't know what the R&D base program was, that the three million dollars was added onto.

Mr. BRETTHAUER. I can tell you what we are doing with that.

Mr. TRAXLER. For the record, we need to know that.

Bill?

[The information follows:]

RESEARCH FUNDING FOR LEAD-BASED PAINT

EPA's Office of Research and Development (ORD) has developed: (1) a multimedia lead (Pb) research plan to support regulatory, enforcement, and abatement efforts across all EPA program offices; and (2) a spending plan for the allocation of FY 1990 Supplemental resources ($3 million).

The ORD Lead Initiative Research Plan includes the conduct of research in four main areas:

1. *Direct Abatement Support:* In FY 1990, $1.2 million are designated to fund projects related to direct lead abatement support. Major emphasis is being placed on work to: standardize sampling and analysis methodologies; develop quality assurance and quality control protocols; design laboratory accreditation program specifications; to develop new technologies for lead-based paint and soil abatement alternatives; and for disposal of Pb-contaminated paint abatement debris and soil. In support of drinking water Pb regulation/abatement efforts, ORD plans also call for research on the efficacy of corrosion inhibitors, technologies applicable to small water systems, and Pb particulates.

2. *Exposure Analysis/Measurement.* In FY 1990 $1.25 million are designated to support lead exposure analysis/measurement projects. Major efforts are also being carried out to quantify the relative contributions of Pb in paint/soil/dust to human exposure pathways (especially for children) and the evaluation of factors affecting differential Pb bioavailability under various exposure conditions. Low-level exposure measurement research activities include evaluation of Pb biokinetics and transplacental transfer of Pb, as well as improved low-level Pb exposure measurement techniques.

3. *Health Implications.* The current FY 1990 funds designated for lead health effects research total $400 thousand. Although the major emphasis of the ORD Research Plan is on abatement and exposure areas, some efforts are planned for further evaluation of Pb health effects. This research includes evaluation of Pb fetal effects, extensions of several large prospective studies on postnatal physical and neuro-behavorial development, and evaluations of Pb carcinogenicity aspects. Initiation of other studies on Pb cardiovascular effects, bone as a Pb target organ and relationships to aging, and Pb immunotoxic effects will need to be delayed to later years depending on availability of funding.

4. *Technology Transfer Activities.* In FY 1990 $150 thousand are designated for technology efforts related to lead. ORD's technology transfer activities will relate primarily to lead-based paint, soil, and drinking water abatement; and will include technical support for preparation of instruction/public information materials and the conduct of workshops or other meetings as appropriate to facilitate transfer of

information to abatement contractors, public health officials, and other pertinent target audiences.

HUD GUIDELINES ON LEAD-BASED PAINT

Mr. **Green**. Did you get to review the HUD guidelines before they were issued, and are you in agreement with them?

Ms. **Fisher**. I believe we did. We have been working very closely with them and there has been a good working relationship between the two agencies.

Mr. **Traxler**. What is the relationship between EPA and HUD on lead-based paint?

How are you doing with it?

Ms. **Fisher**. Well, we have a memorandum of understanding with HUD.

Mr. **Traxler**. Was that easy to achieve?

Ms. **Fisher**. Well, to be honest with you, it was written before I took this position.

Mr. **Traxler**. So those were tough negotiations.

Ms. **Fisher**. I am sure they were very tough.

Mr. **Reilly**. We will take credit for them.

Ms. **Fisher**. Killed off my predecessor.

ASBESTOS ABATEMENT

Mr. **Traxler**. Turning to toxic substances, we note on Page 9-1 the request for 1991 of $113,439,000 represents a reduction of $42,423,000 from 1990. That reduction, of course, represents the Asbestos in School program. Is that an accurate statement?

Ms. **Fisher**. Yes.

Mr. **Traxler**. And EPA also estimates that the cost over many years of asbestos abatement may run as high as $155 billion. That is big money.

Ms. **Fisher**. That is not only for the school's program.

Mr. **Traxler**. As well as public and commercial buildings across the country, in addition, okay?

Does that sound like it's an accurate number?

Ms. **Fisher**. It's very much of an estimate. I think in terms of public buildings, that is based on a survey that the agency did in 1988. It's either—it's got a wide deviation on either side because it doesn't contemplate a real precise estimate of what the problem is in commercial buildings and how often you would actually have to remove asbestos in buildings that might pose a problem.

We are concerned that there is too much removal, quite honestly, too much unnecessary removal going on.

Mr. **Traxler**. Well, welcome to the real world.

This subcommittee has been saying for years that if there was a conventional wisdom in this town that would be wrong it's this one. We are spending untold sums of money which, in our judgment and in the judgment of many others, is totally unnecessary. Which does not depreciate the fact that asbestos, of course, is a very serious threat in some instances to people's health.

We are not suggesting that in every instance, you ought to eat it, drink it and breathe it, but we are saying that there are ways to deal with the problem other than the way we currently are.

So we have built a major industry now that seems to be moving of its own power and momentum. It's very difficult from my observation to get a handle on this in view of the scare involved with this substance.

On that point, we note that there was an article in Time magazine, which re-quoted a piece that was in Science, that essentially says the asbestos scare was overblown.

The Science magazine article doesn't minimize the dangers of asbestos. It clearly can cause cancer, but what the article does say, and what the subcommittee has been saying over the last three or four years is that in most cases, the best thing to do is leave it alone.

Mr. **Reilly**. We would not disagree with that, Mr. Chairman. Obviously we have failed to communicate that very clearly and successfully to the public, which overreacts to the discovery of asbestos in a building.

We have recently had meetings with the Bishops of the Catholic church about the burdens on their school system from asbestos removal.

We have talked to many people in real estate industry. Increasingly lenders are reluctant to provide mortgage assistance to anyone who has a building containing asbestos who has not removed it, irrespective of the fact that the risk may be de minimus or not present at all.

HEALTH EFFECTS INSTITUTE

We, as you know, with respect to the scientific issues, have undertaken a major $12 million multiyear effort to the Health Effects Institute (HEI) in Boston to help assess or re-assess the risk posed by asbestos in buildings. That is underway at this time, and they are moving through a very extensive scientific literature research now.

Irrespective of that, though, we intend to, and have already begun to get guidance out that should make clear that the circumstances that compel removal are quite specific but are not typically present in a building merely because it contains asbestos.

Mr. **Traxler**. I think it's an excellent point, Bill, and you are going to have to say that loud and clear because at the state level, if the asbestos is there, their attitude is, take it out. Talk about overkill.

COMMUNITY PERCEPTION OF ASBESTOS

Mr. **Reilly**. We find that typically once asbestos has been discovered, for example, in a school, that it becomes a major concern of parents who are not so susceptible to being told that it's not a problem, who merely want it removed.

The health effects of removal very often are serious, are more worrisome, and I think the Science article said this, than leaving it in place and trying to contain it and control it and keep it confined.

We will try to make that message more clear in the coming months and do so specifically to the key communities, the school communities.

I promised the bishops that we would undertake this effort. We will get a variety of public information materials made available, and I hope have some impact on this and without in any way suggesting that asbestos all of a sudden is not a threat to health.

Everything we know suggests that it is, and the research based on occupational asbestos experience is compelling on that point.

Irrespective of that, though, we had an objective lesson in our own Region 9 office in San Francisco after the earthquake. The building that our regional headquarters was located in was uninhabitable, and we contracted for another building after the earthquake.

And we then tested for asbestos, discovered that we had a problem and found it necessary to vacate that building. And we still have any number of people, hundreds of them, working at home until we could get this situation resolved.

And there were more than a few concerns on the part of our regional administrator about our testing procedures and the reaction to it.

Well, we are very sensitive to the issue you raise. I hope we are going to be able to address it. I have publicly myself taken every opportunity to "meet the press" and other forums to try to get this message out. It is one that once a panic, once a very serious anxiety builds in the society, however, it is very hard to get through to.

Mr. TRAXLER. Well, I think your communication and your guidelines to the states and others will be very helpful in denying for them what they ought to or ought not to be doing, so I commend you on that effort.

ASBESTOS IN SCHOOLS

Mrs. BOGGS. Among the schools that are considered the most hazardous sites, are you still offering help, advise and monies?

Mr. REILLY. Well, we are. We are.

Mr. TRAXLER. We are?

Mr. REILLY. I think that we have helped any number of school districts. We have funded over 2,000 in the course of the history of that program. We will expect to see a competition for the FY 1990 funds in our budget. I guess the proposals have already come in. We are reviewing them now. We will be making a round of grants. There is still some $43 million; it is——

Ms. FISHER. That is correct.

Mr. REILLY [continuing]. That have not been awarded yet for assistance for those schools.

Mrs. BOGGS. Because the EPA announced in 1987 that the cost to clean up the asbestos in the schools would be about $3 billion, and then the National School Board Association said it would be closer to $6 billion.

We have spent about $245 million on this, so obviously we have only cleaned up about a third of what was estimated.

Ms. FISHER. Well, the funding that the Congress has provided under the loan and grant program has been targeted to the most needy schools, a combination of those with a hazardous problem and a financial need. So the plus $200 million that you have provided in grants and loans was not aimed to deal with all of the need. It was only supposed to help the most needy schools.

So I think more asbestos abatement is going on in the schools than that $200 million reflects.

Mrs. **Boggs**. I see.

Thank you for clarifying that.

Mr. **Traxler**. Which reminds us, doing your risk assessment analysis for us, when you say that funding for asbestos removal would not be your highest priority, or would even be on the list? We don't have a request, as I recall, for it.

Mr. **Reilly**. Well, it is certainly not our highest priority and it is not on our current list reflected in the budget, that is true.

CONSTRUCTION GRANTS

Mr. **Traxler**. Turning to construction grants on page 13-1, what was your request of OMB for this activity in 1991?

Ms. **Wilcher**. We would need to provide that for the record.

Mr. **Traxler**. We are going to ask next year that we get more specific, you should know what your requests were for OMB. Those are important issues for us that we need to have, especially on a number that is as big as this.

Mr. **Grizzle**. Mr. Chairman, the request was $1.5 billion.

Mr. **Traxler**. And you got $1.6 billion?

Mr. **Grizzle**. That is correct.

Mr. **Traxler**. Well, that is a first.

Mr. **Grizzle**. It doesn't happen very often.

Mr. **Traxler**. How well we know. At the beginning of fiscal year 1990, 43 states had operational state revolving fund programs in place. Is it your judgment that the other states and territories will have signed a capitalization grant agreement for SRF programs by the beginning of 1991?

Ms. **Wilcher**. We expect to have made capitalization grants to the rest of the states by the beginning of 1991.

Ms. **Fisher**. Mr. Chairman, New York is a 44.

Mr. **Green**. In the appropriations bill for the current fiscal year, we provided an exception from the revolving fund for the District of Columbia and several territories, and I gather that there was a General Counsel's opinion saying that that is not permanent language? Am I correct on that?

Mr. **Reilly**. Yes, sir, it is, but we would take the view that we would support a change in legislative language to make it so.

Mr. **Green**. So that you would have no objection to permanent language?

Mr. **Reilly**. No.

Mr. **Elliott**. It was the opinion of the General Counsel's office that the current language did not permit us to use the money appropriated in one year in a different year, but we would support getting language that was adequate to do that, and our staff has been working with the staff here to work out acceptable language that would fulfill the committee's intent.

Mr. **Green**. Thank you.

Mr. **Traxler**. Would you provide for the record those states which do not have SRF agreements, and indicate also what the problems are that are delaying the agreements in those states?

Ms. **Wilcher**. Yes.

[The information follows:]

SRF Agreements

The States of Arizona, Delaware, Montana, North Dakota, Rhode Island, West Virginia and Wyoming do not currently have State Revolving Fund (SRF) agreements. We assume that the territories and the District of Columbia will be subject to a broader exemption based on the approach established in the 1990 appropriation bill. Issues and problems involved in the State programs are listed below:

Arizona—The State anticipates bonding for the required State match funds but has been slow in developing its financial plan to accomplish this. Arizona expects difficulty in establishing the required environmental review authority. Expect grant award in FY 1990.

Delaware—No current or anticipated delays. Expect grant award in FY 1990.

Montana—No current or anticipated delays. Expect grant award in FY 1990.

North Dakota—No current or anticipated delays. Expect grant award in FY 1990.

Rhode Island—No current or anticipated delays. Expect grant award in FY 1990.

West Virginia—The State is having trouble meeting the match requirements and in marketing loans because of affordability problems by local governments.

Wyoming—No current or anticipated delays. Expect grant award in FY 1990.

States which do not have SRFs in place by the end of FY 1990 lose half of their FY 1989 allotment (the portion associated with an SRF Capitalization grant). The FY 1989 and FY 1990 allotments associated with Construction Grants and planning are not lost by failure to establish an SRF by the end of FY 1990.

Mr. **Reilly**. May I, on that last point, apparently there is some distinction between the territories and the District of Columbia, for this purpose.

I am not sure why, but we will certainly say here now we will support a change in that language for the territories. I will inquire further and get back to you with respect to the special conditions that OMB seems to have about the District of Columbia on that.

Mr. **Green**. Okay.

Mr. **Traxler**. If a state does not have its SRF in place by the end of fiscal year 1990, does the state lose its Federal waste water construction monies?

Ms. **Wilcher**. Mr. Chairman, I believe that money can be carried over. I think some of that construction money is two-year money. I don't know specifically the answer to your question. We could check, but we are expecting that each state will have the capitalization agreement in place by the end of this year.

SAN DIEGO-TIJUANA SEWAGE TREATMENT

Mr. **Traxler**. Let's talk about the San Diego-Tijuana sewage issue. This has been an issue that has been kicking around for some time, and this subcommittee gets all kinds of advice on it, both from within this institution and elsewhere.

The original concept was to build a treatment plant on the U.S. side of the border. I am not sure, but we may be back where we started five or six years ago. You are requesting $15,700,000 for an international treatment project, providing that Mexico agrees to finance all operation and maintenance costs, attributable to Mexican sewage treatment at the international plant. That was the plan five years ago.

We note that you are including funds in your budget request for the first time for Tijuana sewage. What happened within the Administration on that point?

Mr. **Reilly**. We are still getting organized on that point. It is something, I think, of a breakthrough that we have these funds, that we propose to be made available for that treatment plant. It would be a 25 million gallon per day plant. There are a number of issues that will have to be worked out. There is concern about the cost and how they are borne for the collector pipes.

The United States is now proposing that Mexico pay a substantial part of that. We have not fully resolved the consequences of growth over time and how any increase in capacity, which looks inevitable, will be addressed.

The Mexican government has taken the position that they would compensate, or pay costs equivalent to what they would bear with New Mexico for construction and also for operation and maintenance. That at least was their position at one time.

Those negotiations continue. As of last week, they were still moving along, and we have not had any indication from the State Department that they have broken down or that the Mexican government, faced with the current position of the United States is proposing to withdraw from the negotiations.

So they may need more time and we may need more time to develop our own position in a way that brings the two sides closer together.

Mr. **Grizzle**. Mr. Chairman, while I think it is fair to say there are still some problems in terms of the stipulations that exist at the moment, we believe that it is a step in the right direction and a significant step in the right direction, to have money in our budget proposal this year to begin to address the problem.

Mr. **Lewis**. Mr. Chairman, if I could interject.

Mr. **Traxler**. Please.

Mr. **Lewis**. I must say that I agree with that last comment. The Salinas government, the new government of Mexico, is doing some things, in terms of changing policies and making some economic sense. It would be a mistake for us in this committee and maybe the agency, not to understand that there is a big political difference between the Salinas regime and northern Mexico which is where the other party's governor was elected. There is a huge gap otherwise between the northern part of Mexico and western Mexico, and so pressure to help build infrastructure there, is indeed a difficult international question.

We are playing a very, very important role. That territory has huge multiple infrastructure difficulties. I frankly think that our good pressure, indeed our money, may very well help to bridge a very important difficulty.

Mr. **Traxler**. Can you tell us what you estimate the current total project cost at?

Mr. **Grizzle**. The current estimate of the Federal share is roughly $100 million.

Mr. **Traxler**. But what will the total project cost be?

Mr. **Grizzle**. Mr. Chairman, I don't have that figure off the top of my head. I will provide that for the record.

[The information follows:]

TOTAL COST OF TIJUANA TREATMENT PLANT/PLANT COST BREAKOUT

Based on planning studies to date, the IBWC estimates the total project (treatment plant and disposal facilities) will cost $175 million to construct. The cost breakdown is as follows:

	Millions
25 mgd treatment plant	$95
Land Outfall	39
Land Outfall Extension	12
1-mile Ocean Outfall	25
Pipeline from Mexico (U.S. share)	4
Total	175

Funding needs based on estimated costs for Land Outfall construction ($39 million) have been met with previously appropriated federal funds and state and local monies. Federal funding requests for the remaining components ($136 million for the plant, extension, ocean outfall, and pipeline in Mexico) would be spread over the next four fiscal years as follows:

	Millions
Fiscal year 1991	$15.7
Fiscal year 1992	49.9
Fiscal year 1993	56.3
Fiscal year 1994	14.1
Total	136

This cost distribution assumes the U.S. will loan Mexico its share of construction costs ($16 million) for repayment over 10 years. Once this loan is repayed, actual U.S. costs would be $120 million.

TIJUANA PLANT CAPACITY

Mr. **TRAXLER**. Tijuana has grown at an incredible rate, I think about a 40 percent increase. You alluded to this in your remarks a few moments ago, and the question is, Is the plant already obsolete?

Is what you are talking about based on old population numbers, or doesn't that influence to a large extent the design and cost of the project?

Mr. **GRIZZLE**. I think our estimate is that the 25 MGD would provide adequate capacity through 1995.

Mr. **LEWIS**. Mr. Chairman, I think your question is really very important, because it is one thing to talk about through 1995 and our current knowledge of what exists, but if Mexico should ever move in the direction of actually building pipe lines that deliver sewage to treatment plants, I mean my God, I don't know what we would have there, and I hope that we would open up our minds in terms of the need and encourage them to move forward as rapidly as possible, and not to find ourselves falling short.

Mr. **GRIZZLE**. Mr. Lewis, I think the Agency certainly has an open mind to plan for the future to make sure that we take care of this problem.

Mr. **LEWIS**. I hope you understand that they may not have.

Mr. **REILLY**. Well, this is a related issue.

As you well know, the reluctance to see these commitments become open-ended or go higher is related precisely to the potential open-ended possibility of what might be down the road as a consequence of growth.

There are three more phases to expand that plan that are contemplated, but no readiness at this time on the part of the United

States Government to pay for those costs, which are going to be very considerable.

Mr. LEWIS. It is a tough problem. Our beaches are just to the north.

Mr. REILLY. I would just say more broadly, your point about the Salinas government is certainly correct from the environmental perspective.

Last summer, for the first time, the environment was part of the bi-national agenda. I accompanied the Secretary of State, the Attorney General, the Secretary of the Treasury and others to work with the Mexicans on a number of their issues, many of which we share. For example, the border issues and Tijuana, San Diego, and some other areas. We also made a commitment on the part of the United States, with EPA as the lead agency, to try to assist the government of Mexico to address the problems in Mexico City that President Salinas has given the highest priority to.

Mr. LEWIS. Mexico City has immense air quality and other problems, but I wish there were a way that we would helicopter over Tijuana and look at the related air quality, sewage. I mean, it is unbelievable, and even though we can't impose, nor do we want to, upon Mexico. It nonetheless, all that stuff flows our way.

Mr. TRAXLER. The subcommittee has been concerned about this issue, because we see a potential here for incredible expenditure. We thought about five years ago that we had cast in concrete a deal with OMB to put a cap on this in the area of $32 million, and we are sort of moving upward, and I have a sense that like some of our major science projects, this subcommittee is about to get rolled, in that the costs are rapidly escalating here.

Mr. REILLY. I believe that with this $15.7 million we are already allocating well in excess of that.

Mr. TRAXLER. Yes. Of course, the agency has spent a lot of money on this project already, and I might ask for the record, where did it go? You think it is in the area of $32 million? We are curious to know what happened to it.

Mr. REILLY. There was, as you know, the long negotiations about the defensive works plan, and it has finally been abandoned as a feasible option. We will supply that for the record.

[The information follows:]

EXPENDITURES TO DATE ON TIJUANA

Since 1984, Congress has appropriated $31.7 million to address the Tijuana sanitation problem. In 1984, Congress appropriated $5 million to plan and design treatment works, specifically the defensive works or "return to sender" project. Funds from this appropriation have been used to design the Land Outfall pipeline and, until 1988, the other components of the defensive works project. We are now utilizing these funds to complete a conceptual plan and environmental documentation for the International Treatment facility (Treatment Plant, Land Outfall extension and Ocean Outfall) as an alternative to the Defensive Works concept.

In 1989, Congress appropriated $20 million, which EPA has obligated to the U.S. Section of the International Boundary and Water Commission (IBWC) through an interagency agreement. These funds will be used to construct the Land Outfall, an essential component of the International facility, and initiate a full design of the Treatment Plant, Land Outfall extension, and Ocean Outfall.

The $6.7 million appropriated for fiscal year 1990 will be used to complete design of the facility. Any remaining funds will be applied toward its construction.

FUNDING OF TIJUANA SEWAGE TREATMENT PLANT

Mr. TRAXLER. It is a difficult issue. I think what we need to know is, first, what is your best judgment as to what this plant's going to cost; second, what do you anticipate the Federal share will be?

Mr. REILLY. You are assuming what now? Through the year 2000? Commencing in all future growth?

Mr. TRAXLER. It is sort of a floating decimal here, isn't it, because in my mind I have no concept of what you may be talking about, you are talking about 25 million gallons per day capacity. We don't know how long that number is going to hold, and before the plant is finished, will they have to begin an expansion program?

We are going to let you pick the number.

Mr. REILLY. All right.

Mr. TRAXLER. Not the subcommittee.

Mr. REILLY. We will get back to you on that.

Mr. TRAXLER. So we want to know what that plant is going to cost. We want to know what the Federal share is anticipated to be, and what you anticipate that the Mexican share will be.

Mr. REILLY. All right, sir.

[The information follows:]

SAN DIEGO-TIJUANA TREATMENT PLANT: COST SHARING

Based on an initial assessment of IBWC's planning studies to date, EPA has estimated construction costs for the project to be $175 million. However, negotiations with Mexico are continuing. At this time we estimate that Mexico will pay $16 million for construction of the treatment plant and the U.S. will pay $79 million. Neither total project cost estimates nor cost sharing arrangements have yet been finalized by the two countries. However, the cost-sharing scheme is consistent with the direction given by Secretary Baker in a October 1989 diplomatic note in which he agreed that Mexico's financial contribution should be the same as that required to construct, operate and maintain a treatment plant in Mexico. When the final cost figures come in, we will provide them to the committee

Mr. TRAXLER. Let's just take a four minute seventh inning stretch. Everyone seems to appreciate that. Let's get organized.

[Recess.]

SUPERFUND BUDGET REQUEST

Mr. TRAXLER. Turning to Superfund, the request for 1991 is $1,740,000,000. If our 302(b) allocation, we have been remarkably silent on this side of the table on an important event and figure, is too small, should the subcommittee cut Superfund first or operating programs first? Which of your children do you love the most?

Mr. REILLY. I didn't know how that question was going to end. I thought I might be able to answer it.

OPERATING PROGRAM

The President, as you know, has for each of the last two budget cycles, requested more for Superfund than the Congress has appropriated. The public concern with hazardous waste and cleaning up these sites is very, very high, and the targets, as you know, are very explicit, very tight.

We had an excellent year last year. We exceeded the new remedial action starts target. We will not be meeting those targets in the future, with the level of support that has been made available to us over the last two years and with the funds that we are asking for this year. So it is very hard to say that we, without some kind of altered public expectation and sensitivity to the competing needs, want less money in the Superfund budget.

I have been clear since last year on this that I think that the best investment that we can make in environmental protection at EPA is in the operating program. It is in the glue that holds the place together and strengthens our core capacity to do not just hazardous waste clean up, but all of the many missions that the public has directed us to do.

I continue to feel that way, and I do put the priority on the operating program, the operating fund money. I have been particularly concerned to get that increase, that 12 percent increase that we are asking for, and I think it is vitally necessary to everything that we do.

EPA TRANSFER OF FUNDS FOR INTERNATIONAL PROGRAMS

Mr. **Traxler**. It is our understanding that funds were appropriated in the Foreign Affairs bill to EPA for the Agency for International Development, and then there was a transfer to EPA for use in Hungary and Poland, and if that is correct, how much was transferred and what did you use that money for?

Mr. **Reilly**. Well, the principal activities we have been supporting in Eastern Europe are the Regional Environmental Center, which is to open soon, a $5 million regional center for the environment in Budapest that the President announced support for when he visited Hungary last year, and monitoring and improvement of air quality and also other environmental problems in Poland.

Is the figure $11 million?

Mr. **Atkeson**. Tim Atkeson, International Activities EPA. The scheme was over a three-year period, $5 million for the regional center in Budapest, $5 million for the Krakow water and air quality monitoring.

Mr. **Traxler**. What was the total transfer?

Mr. **Atkeson**. The transfer comes in yearly and in installments, which is something over $3 million, a third of $10 million.

Mr. **Traxler**. We also included in the 1990 appropriation, $1 million for direct EPA funding to support the environmental initiatives in Poland. We understand, of course, that that is in addition to the monies that you received during the transfer. Can you tell us how that $1 million is being applied?

Mr. **Atkeson**. The direct appropriation is being used for various projects, largely for the planning projects in Poland at this time.

Mr. **Reilly**. On that issue, the Minister of Environment from Poland was here recently, and told us that they are assessing their environmental needs, which are very high throughout Poland, and indicated that they see a figure of in the range of $32 billion for clean up in the environmental protection area, particularly water and waste in Poland.

They have asked us to continue to give them advice, technical assistance, help with strategizing priorities. Obviously their own economy is not in the position to generate anything like that amount of money in the near term.

We have agreed to do that, and there is a proposal apparently pending that would provide significantly more funds, I believe.

MANAGEMENT AND SUPPORT

Mr. **Traxler**. Turning to management and support, we understand the agency contracts out a number of services. Some people argue that some of those activities could and should be done inhouse by Federal employees.

Further, we are told that some testimony by or for the agency is prepared by contract personnel, and some of it is done in-house by Federal employees. Is that correct?

Mr. **Reilly**. I think that some of the concerns raised by whether testimony was being prepared were based on a misapprehension. We inquired into a specific case that was brought to our attention where a contractor had advertised that he, in fact, played this role. It turned out that he had helped with the preparation of graphic material and the design of them, but had not, in fact, drafted testimony or prepared any substantive submissions.

On the broader issue, we do, as you know, rely on contractors. A number of our programs are designed to do that. We do not have the personnel to obviate the need for contract support, but have, in fact, over the past several months undertaken a review of conflict of interests as it affects our contractors, engaged our Regions in that question as well. We have prepared guidance on the precise role of contractors in doing a number of things, making clear that involvement in policy and in testimony that pertained to that uncertainty circumstances are out of question.

We have provided some of that guidance already. We are developing more that will be provided in the near future, and I think we are reasonably confident that we are addressing that concern that has been raised by a number of people.

Mr. **Grizzle**. Mr. Chairman, if I could point out, I guess one of the critical things, as we assess whether indeed the agency is overleveraged in the use of contractors, the movement of some of that work in-house must be done gradually.

If we have the ability—if we suddenly shut off the ability to use contractors in a particular program, but don't have the FTE from OMB to move that work in-house, then how is the work going to get done?

So it really has to be a gradual process, at the same time that we examine issues that Bill raised in terms of conflict of interest, areas that we will provide specific guidance to the programs where they may not indeed use contractors, and, thirdly, areas where great care must be exercised in the use of contractors.

Mr. Traxler. I would suspect that you have a system in mind that protects you from potential conflicts of interest on these contract employees?

Mr. Reilly. We have tightened up the guidance that we do have. It probably wasn't as tight as it should have been.

Mr. Grizzle. We have recently established in my procurement and contracts management division a conflict of interest staff to begin to give us the in-house expertise to do that.

Further, we have relied on contractors to self-certify that there is no conflict of interest and we will be conducting a series of field reviews of our contractors to ensure against conflict of interest, and thirdly, as we increase competition and try to break up some of the large contracts, we think that that increased competition will reduce the potential for conflict as well.

Mr. Reilly. I am very concerned about avoiding conflicts of interest, but I confess to assert versus what reaction when the concern, the criticisms is made that we are relying successfully on contractors. That is the nature of the situation we are in by virtue of the evolution of our programs, and the personnel that we have to manage them.

The Superfund program, clearly other programs within the agency, have been described in such a way that we have to rely to a significant degree on contract help.

CONTRACTOR SUPPORT

Mr. Traxler. It is our observation that new agencies, such as EPA, traditionally have had to rely more on contract employees than what the more established agencies have had to do, because they had a base over the years of FTE, which you weren't able to develop as the budget crunch came along and as the Congress has imposed new responsibilities on the agency. So it is not an easy issue, and I guess we are just cautious in this area because there is potential for abuse.

One of the things that we need to know is how do you determine whether to charge a contractor for a service to the salaries and expense appropriation account or a program appropriation such as Abatement, Control and Compliance?

Mr. Reilly. Charlie?

Mr. Grizzle. I can provide the specific direction for the record, Mr. Chairman, but it is safe to say that most of the AC&C account is contract monies as we view it. There is a limited amount of contracting done out of the salaries and expense appropriation, but we are trying to move away from that and limit it.

Mr. Reilly. Most of the contracting work is industry work, policy work and evaluation. It is very limited.

Mr. Traxler. There is some concern that OMB will not permit the agency to hire a sufficient number of Federal employees to accomplish your mission, and that you ought to have a level of inhouse expertise to be able to effectively manage your programs. Yet OMB has not released all of the FTE that Congress provided funds for in 1990.

Is there concern within the agency that you are contracting out for the performance of work that is an inherent government function and in many instances that you would prefer to do in-house?

Mr. **Grizzle**. I don't believe that we feel uncomfortable in the agency with our interpretation of OMB Circular A-76, which defines what is inherently governmental. There is the issue, as you raised, Mr. Chairman, of securing enough workers to move that work in-house, so to speak. But I think that EPA has interpreted fairly what is inherently governmental, and I don't really believe we have gone beyond that.

Mr. **Reilly**. Could I mention that the Office of Management and Budget, I think, in this Administration has a somewhat different philosophy from the last Administration.

They have not taken the view that it is desirable to reduce to the maximum extent the FTE certainly within EPA, and I think within other Federal agencies, as a way to contain escalation of government spending.

And the best evidence of that is their support and ready agreement to transfer a significant amount of work that had been contract work, in the Superfund area, some 500 FTE equivalents, to agency employment in order to strengthen the management commitments we made in a review last spring, particularly with regard to enforcement.

That is, I think, a very good sign of a greater degree of support for strengthening the core capacity of our own people to manage programs that previously had been more relined, more dependent on outside help.

OPERATING COSTS

Mr. **Traxler**. Are the operating costs for your laboratories charged to the salaries and expense account or to abatement, control and compliance?

Mr. **Reilly**. Program laboratories are funded primarily out of the Salaries and Expenses Appropriation. R&D does some of its research work, and with our commitment of the $11.6 million and equipment that is coming out of R&D, the rest of the money comes out of the S&E account.

FINANCIAL CONTROL

Mr. **Traxler**. In your judgment, do you have adequate financial controls to assure that the account charged for a certain service is consistent among your facilities? Are you applying the same accounting principles to all of the facilities?

Mr. **Reilly**. Yes, we are. We track and account in a standardized way, and all offices have the same objectives. All offices operate with the same basic accounting structure that is used across the entire agency.

Mr. **Traxler**. Are there instances where a charge for a service has been made against the salaries and expenses appropriation for a number of years and is now being charged against, for instance, abatement control and compliance?

Mr. **Reilly**. No. We would like to more closely align some of the costs that we think are appropriate in the agency and in the R&D

account, but we haven't done that yet. We would like to discuss both with you and the staff some of the specific proposals in that area for charging that we haven't done. Again, the one major charging issue that we can mention is the $11.6 million of equipment, which, again, you have supported that we do for the R&D community out of the R&D appropriation.

Mr. **Grizzle**. The account that historically, Mr. Chairman, which has the most stress is the salaries and expenses account, and to the extent that we can properly charge those expenditures, either to the AC&C account or to the R&D account, it enables us to more closely hire up against our authorized ceilings in the salaries and expenses account.

Mr. **Habicht**. For people who are relatively new to this world of government accounting like Bill and myself, there are some anomalies there that we are looking seriously at. I want also just to add that Bill has set up a senior council on management and controls, which looks at the way we account and review expenditures that I chair, and that has the active involvement of all of our senior managers.

Mr. **Traxler**. Thank you.

Incidentally, is your Inspector General here?

Mr. **Reilly**. Yes, he is. John Martin is seated on the end there.

Mr. **Traxler**. Are you alive and well?

Mr. **Martin**. Yes.

Mr. **Traxler**. Getting good cooperation of the agency?

Mr. **Martin**. I am getting excellent cooperation, both the Deputy and the Administrator, and everybody seems to help us out.

Mr. **Traxler**. Do they heed your voice when you raise it?

Mr. **Martin**. Sometimes more than others.

Mr. **Traxler**. Is there anything we need to know?

Mr. **Martin**. The Deputy Administrator told me that I am always asked one question along those lines. I can tell you that since I have been here, I have never found a higher level of cooperation than I have from the team that Mr. Reilly has set up, and any issues that we have, we regularly provide to the committee as well as other committees of the Congress our audit reports, so that you can keep abreast of issues that are of interest to you from a budget point of view.

And if you have any concerns, you know, you are always certainly welcome to contact us.

Mr. **Traxler**. Very good.

FY 1991 PAY RAISE

You are requesting an increase of 919 work years in 1991 from 15,842 in 1990 to 16,761 in 1991. Are there sufficient funds in your 1991 request for personnel compensation and benefit costs to cover the January 1991 pay increases for the SES and other employees?

Mr. **Reilly**. That is a $27 million——

Mr. **Grizzle**. The pay raise of $26.3 million is not included.

Mr. **Traxler**. Not included.

Mr. **Reilly**. We carried through the 1990 pay raise, but we did not include a 1991 estimate of need and eventual pay raises.

Mr. Traxler. In some agencies, it is included in their budget and others it isn't.

Mr. Reilly. I am sure OMB is going to love to hear that, because they said we did not, and they went over it very carefully, at least in our case they did.

Mr. Grizzle. Mr. Chairman, we would be delighted to have a list of those agencies that do.

Mr. Reilly. He will supply it for the record.

Mr. Traxler. Mr. Chairman of the EPA, we were told by the Director of OMB that in every instance it was included, so we are kind of curious as to what happened to you. But, of course, the good old first team will come through I hope.

What is that figure that is going to be necessary to cover the additional pay cost?

Mr. Grizzle. $26.3 million.

Mr. Traxler. It wouldn't be fair to ask you how you intend to do that.

Mr. Grizzle. Mr. Chairman, we don't mandate across the agency whether a program can hire up against its ceilings at 100 percent and then not fully fund their workers in terms of travel, training, et cetera. We have that rather flawed.

So some agencies—some part of the agency might choose to hire up against their full ceilings; others might intentionally lapse workers to be able to fully fund the work force.

So we unfortunately are faced with those constraints when the S&E account isn't fully funded to cover the cost of the pay raise.

Mr. Reilly. We have also requested transfer authority in the appropriation language that was sent to you. We would have to take a look at that to see the tradeoffs that we would have to make.

Mr. Traxler. What permanent work year level does the agency plan to have on board by the end of fiscal year 1990?

Mr. Grizzle. I would have to provide that projection for the record.

[The information follows:]

EPA Permanent Workyears

The following table shows the projected end-of-year permanent workyear levels, by appropriation.

	Fiscal year 1990—Projected end-of-year
Account:	
Salaries & expenses	11,414
Superfund	3,082
LUST	81
Inspector general	313
FIFRA revolving fund	191
Reimbursements	62
Total	15,143

FY 1991 STAFFING INCREASE

Mr. Traxler. And how quickly can your proposed 1991 staffing increase be brought on board?

Mr. Grizzle. It is really difficult to predict that across the agency. It depends on the occupations we are seeking. We meet with greater success in hiring up in some areas than in others. We seem to attrition faster in other areas.

I think that the work force is going to be somewhat stable at the senior levels across government for the next few years because of the anticipated pay raise at the SES level, so you will see people staying around.

Mr. **Traxler**. For the record, will you please prepare a table for fiscal years 1988, 1989, 1990 and 1991 breaking down the total workyear level between headquarters and each field station. Also break down the contractor support personnel between headquarters and each field location for the same four years.

Mr. **Grizzle**. Be pleased to do so.

[The information follows:]

EPA WORKYEAR-HEADQUARTERS/REGIONS

The following table represents the number of employees in Headquarters and Field Stations for the fiscal years of 1988, 1989, 1990, and 1991.

	FY 1988	FY 1989	FY 1990	FY 1991
Headquarters	5,021	5,490	5,812	6,149
Regional Offices (10)	6.704	7,238	7,542	7,979
Field Stations:	2,853	3,147	3,159	3,342
Research Labs/Cntrs	1,526	1,735	1,765	1,867
Office of Enforcement:				
NEIC - Denver	118	145	132	140
Criminal Investigators	53	45	56	59
Air Programs:				
Ann Arbor, Michigan	220	247	246	260
Denver, Colorado	26	9	7	7
Research Triangle Park, NC	292	311	295	312
Water Programs:				
Cincinnati, Ohio	28	27	30	32
Radiation Programs:				
Montgomery, Alabama	43	43	48	51
Las Vegas, Nevada	17	27	23	24
Office of Inspector General	175	174	174	184
Office of Admin. Res. Mgmt.	313	346	341	361
Emergency Response Program:				
Edison, New Jersey	25	21	22	24
Pesticides Field Programs	17	17	20	21
Total Employees	14,578	15,875	16,513	17,470

SUMMARY OF CONTRACTED FTE'S BY APPROPRIATION (FY 88-91)

APPROPRIATION	FY 88	FY 89	EST. FY 90	EST. FY 91
Salaries & Expenses (S&E)	686	666	700	800
Superfund	2,723	3,075	3,400	3,700
Abatement, Compliance and Control (AC&C)	1,706	2,238	2,400	2,600
Research & Development (R&D)	868	955	1,100	1,200
Building & Facilities (B&F)	149	28	50	50
Leaking Underground Storage Tanks (LUST)	25	27	30	30
Federal Insecticide, Fungicide & Rodenticide Act (FIFRA)	--	14	20	20
TOTAL	6,157	7,003	7,700	8,400

NOTE: FY 88 and 89 FTE's are based on dollars obligated against contracts which are primarily for services, divided by hourly estimated rates (see below), to arrive at total estimates hours. A standard of 2080 hours is then applied to convert these hours into FTE's. The hourly rates used, $78/hour for Superfund contracts and $54/hour for non-Superfund contracts (including a factor for Other Direct Costs), were derived by analyzing several fiscal years' worth of cost analysis reports. They represent our current best estimate (until we are able to fully analyzed financial data on actual hours expended by the contracts). Projected FTE's for FY 90 and 91 are based on our overall Agency estimate for contracting activity anticipated during these fiscal years.

Mr. TRAXLER. Mrs. Boggs, do you have any questions?

POLLUTION PREVENTION

Mrs. BOGGS. Only on the support and management activity.

The agency's emphasis on pollution prevention, of course, is commendable, and certainly seems to be a reasonable approach. But will the Office of Pollution Prevention coordinate these efforts, or will each office be responsible for implementing its own strategy?

Mr. REILLY. Well, the correct answer really is both. We are designing a policy that makes it incumbent on each agency to look for opportunities to move toward pollution prevention, and to try to infuse in all of their activities and regulations that philosophy.

The overall coordinator is the Office of Policy, Planning and Evaluation, and we have an agency-wide task force on pollution prevention that tries to make sure that we are coherent, systematic, and aggressive in doing what we can on pollution prevention.

Terry Davies, the Assistant Administrator for OPPE, might wish to add to that. Do you want to, Terry?

Mr. DAVIES. No, I think I agree with that.

Mrs. BOGGS. Thank you.

Mr. TRAXLER. That concludes the hearings on the 1991 budget.

Mr. REILLY. Thank you.

Mr. TRAXLER. Well done, and congratulations. We are pleased with your agency.

Mr. REILLY. I appreciate that very much. Let me say that these hearings have directed attention to some extremely important, really fundamental questions, and look at——

Mr. TRAXLER. Could we have your attention, please, because the Administrator is making a very important statement. This is the major reasons why we hold hearings, frankly.

Mr. REILLY [continuing]. Well, I want to say that the quality of the dialogue that we have had, and the specific attempt that I see in so many of your questions to focus our attention on the priority risk and threats to health and the environment, and to encourage us to justify the levels of support, the priorities we are giving in the various programs according to a common standard is very helpful, and is something I completely agree with.

And I must say was very impressed by yesterday. We will try to move the programs in that direction, and, obviously, won't do it all overnight for a variety of reasons, but that is a direction that I appreciate your encouragement on.

Mr. TRAXLER. Well, I am grateful for those remarks and I think they are precisely on point. Sometimes the justification hearings are like going to the dentist, however in the long-term it is very healthy. We learn a great deal, of course, with these questions and we think it is very instructional for the agency as well if you are required to examine your purpose, intent, direction and prioritizing.

So it has been very beneficial. You are all fine folks. Thank you.

[Questions for the record and the justification follow:]

Questions Submitted for the Record by Congressman Traxler

NEW COOPERATIVE AGREEMENTS -- WATER QUALITY MANAGEMENT

Question: On page 3-35, you are requesting $16.5 million for new cooperative agreements for water quality management. These grants replace set asides under the construction grants program which were eliminated due to the phase out of direct grants. Your request of $16.5 million is 17.5 percent less than the set asides were in fiscal year 1990 -- or about $20 million. Why aren't you asking for the same level as provided under the set asides through construction grants in 1990? Has the need diminished since last year?

Answer: The Agency's FY 1991 request for grant assistance to states consists of funding under both Section 106 and the cooperative agreements (Section 104(b)(3)). The FY 1991 request for Section 106 funding represents an increase of nearly $10 million from FY 1990. The FY 1991 request for $16.5 million under Section 104(b)(3), coupled with the increased Section 106 request, is intended to help offset the loss of the set-asides under the construction grants program.

Question: The justifications indicate that the funds will be targeted to states that commit to achieving concrete results. What does that mean -- can you give us some idea how you quantify that? How will the funds be allocated?

Answer: Cooperative agreements will be negotiated with states to cover specific activities, particularly complex, new activities that states must perform in addition to their base program functions. For example, funding for National Pollutant Discharge Elimination System (NPDES) permits, pretreatment and enforcement will be used for key activities such as complex new permits for combined sewer overflows, stormwater discharges, sludge disposal and hazardous and toxic wastes. Likewise, funding for water quality standards and monitoring activities will be used to adopt new state water quality standards for toxics, saltwater and wetlands. At the time of application, states will be asked to identify quantifiable measures against which their progress will be tracked.

The construction grants set-asides were available to all States. The $16.5 million will be available to NPDES and/or pretreatment states for activities related to NPDES permits, pretreatment and enforcement. The funding will also be available to all states for activities related to upgrading state water quality standards and monitoring programs.

The Agency has yet to determine how Section 104(b)(3) funds will be allocated but intends to assign priority in the allocation and award of these funds to states which have assumed authority for the NPDES program.

Congressman Traxler

OCEAN DUMPING PROGRAM

Question: On page 3-47, you are requesting $9,487,000 and 60.3 workyears for the ocean dumping program. This is about a 20 percent decrease below last year's level of $11.3 million. Why the decrease?

Answer: The reduced funding request for the ocean dumping program can be attributed to two factors. First, the Ocean Dumping Ban Act (ODBA) of 1988 required affected sewerage authorities to pay ocean dumping fees. These fees were allocated to federal agencies for ODBA implementation. EPA will be supporting 10 workyears in 1991 from the ocean dumping fee account and thus, less money was requested from the Salaries and Expenses Appropriation for the ocean dumping program in FY 1991. Secondly, the $1,092,100 decrease in the ocean dumping program's Abatement, Control, and Compliance Appropriation can be attributed to EPA's completion of some studies which were supporting the development of the ocean dumping regulation proposal.

Congressman Traxler

DRINKING WATER

Question: The total increase for drinking water is about $11.8 million--of which $5 million is for enforcement efforts--and that represents a $1.2 million increase. Do you think that your budget request for fiscal year 1991 reflects adequately the national drinking water problem?

Answer: The budget request for 1991 focuses on implementing standards that will reduce high priority risks to human health in drinking water supplies.

Question: Once again it looks like you are expecting the states to pick up the bulk of this cost--is that correct?

Answer: The FY 1991 President's budget includes almost a 20 percent increase in the state grants. EPA is working closely with the states to develop alternative funding mechanisms such as fee structures, dedicated taxes, bonding and state revolving funds. We are also helping the states to adopt new measures that will reduce the size of their needs and facilitate implementation. An example is an authority to control construction of new, non-viable public water supplies.

Question: How many states do you feel may relinquish responsibility for the program back to EPA based on excessive financial burden at the state level? Are any states about to relinquish responsibility back to EPA?

Answer: Many states are in jeopardy of losing primary enforcement authority for failure to demonstrate sufficient program capability. We are not able now, however, to estimate how many states might actually end up doing so. Primacy revocation is a step neither EPA nor the states would want to take. To avoid this, EPA is targeting states most at risk of losing primacy and providing additional technical assistance specific to the problems of the state. EPA is prepared to fulfill its obligation to implement public water system programs in the event states are unwilling or unprepared to fulfill the responsibility adequately. However, we recognize that it would cost EPA far more than it presently spends to directly implement national requirements, and that EPA could only implement the most rudimentary program with available resources. A far more effective program will result when EPA and the states work in concert together and combine their resources.

Congressman Traxler

RURAL WATER

Question: Each year we seem to go through a little dance over the rural water appropriation. Once again in 1991 you are reducing the budget for special studies and demonstrations by $3.7 million down to just $1 million. What is the authorized level of funding for technical assistance to small public water systems?

Answer: The authorized level of funding for technical assistance to small public water systems lies in the Safe Drinking Water Act's (SDWA) general authority for EPA "to make grants to and enter into contracts with, any . . . organizations [to] pay . . . costs . . . of any project or activity . . . designed . . . to develop and expand the capability of programs of states and municipalities to carry out the purposes of this title [SDWA, or Title 14 of the PHS Act] . . " (Section 1442(b)(3)). The authorization is Section 1442(f), which authorizes $38,020,000 for FY 1991.

There is also a separate authorization for EPA to provide technical assistance to small public water systems to enable such systems to achieve and maintain compliance..."(Section 1442(g)), specified at $10 million for FY 1991.

Question: Why do you keep cutting this program--is it truly a lower priority?

Answer: EPA requested an increase in the Public Water System state grants in the belief that states should be the principal party providing technical assistance to small systems. We have given priority to increases in state grants, given the need to make tough choices in a tight budget year. We believe efforts to promote voluntary compliance and self-policing among water systems and efforts to give systems the knowledge and skills to help themselves are well worthwhile and cost-effective. Indeed, these are the principal means to achieve compliance among the nearly 200,000 public water systems nationwide. The National Rural Water Association (NRWA) and the Rural Community Assistance Programs (RCAPs) are two important tools to this end but not the only tools. EPA is trying to mobilize other parties to help, including the American Water Works Association, the National Council of State Legislatures, the National Manufactured Housing Association, various educational-support associations and the Association of Sate Drinking Water Administrators.

Question: Are you making the cuts or is OMB making the cuts?

Answer: The 1991 budget request to OMB asked for $1 million to help support NRWA and RCAPs. The same request sought an $18 million increase in Public Water Systems Grants.

Congressman Traxler

PUBLIC WATER SYSTEM GRANTS

Question: You are requesting $47.5 million for public water system grants in 1991. This is an increase of about $8.1 million above 1990--but your own study suggests that about $200 million is needed. What about that--is the $200 million number correct?

Answer: This study, "State Costs of Implementing the 1986 Safe Drinking Water Act Amendments" was prepared jointly by EPA and the Association of State Drinking Water Administrators. Total needs are estimated to be $200 million a year for several years as our new regulations are put in place and implemented. Only a portion of that amount would be funded by federal resources. Since the study was completed, some changes have reduced estimated implementation costs for 1991. Some regulations are being promulgated on a later schedule than was originally assumed, and EPA is phasing in the regulations over several years. EPA is also encouraging the states to consider directing utilities to use private laboratories to meet monitoring requirements rather than increasing state laboratory capacity to meet utilities' needs as monitoring requirements increase.

Congressman Traxler

HAZARDOUS WASTE/SOLAR RESEARCH

Question: Let's look at hazardous waste research and development where on page 5-1 we see that you are reducing that activity by about $4 million. What's the rationale for that large a reduction?

Answer: In FY 1991, funding for two research centers, (1) Urban Waste Management and Research Center at the University of New Orleans and (2) Integrated Hazardous Waste Research Center at TUFTS University is not requested because Federal assistance to date to these two institutions should be adequate for startup and initial support. In addition, funding will be completed in FY 1990 on the cooperative agreement with DOE to study use of solar energy for treating hazardous waste. The R&D funds for these two research centers and the cooperative agreement amounts to about $4.8 million in FY 1990. This is offset by an increase in municipal solid waste research. The net reduction is $4 million.

Question: On page 5-18, the justifications indicate that solar energy research involving solar power to treat waste will be phased out.

First of all, why are you phasing it out and secondly, if you are phasing it out what did you learn -- does it work -- or doesn't it work?

What was the total amount you spent on solar energy research involving waste?

Answer: Due to other competing high research priorities, current FY 1991 planning does not include any resources for EPA to continue work in this area. However, we will continue to provide technical assistance to the Solar Thermal High Temperature Waste Detoxification Review Board.

In FY 1990, we are spending $243.5K to conduct cooperative research with the Department of Energy (DOE) to demonstrate and evaluate solar energy applications for hazardous waste treatment and disposal. For the past 3 years, at the invitation of DOE, representatives from EPA have been providing technical advice to DOE's Solar Energy Research Institute (SERI) concerning its experimental efforts to develop and evaluate a Solar High Temperature Waste Detoxification System. EPA's representatives are actively involved as Review Board members and following the progress of this program.

EPA is using the $243.5K to support certain hazardous waste research studies where DOE has not fully explored the performance potential, application, or reliability of using solar energy to treat and dispose of waste. This research has two main components:

1) DOE has tested single hazardous waste compounds in relatively simple liquid or solid matrices. Further laboratory and model explorations of multi-compound mixtures in more realistic matrices will determine the pragmatic applicability of this technology.

2) Application and design of a through-type solar reflector to treat hazardous waste.

Congressman Traxler

TRANSFER OF FACILITIES TO SUPERFUND

Question: How many facilities may have to be transferred to this Superfund program because the facility owners/operators won't pay up?

Answer: The primary reason for transferring RCRA facilities to Superfund is that the owner/operator is bankrupt or otherwise financially unable to pay the cost of corrective action at the facility. The Agency has not estimated how many RCRA facilities might fall into this category. Over the last two years, the Agency has added seven RCRA sites to the National Priorities List because of bankruptcy or unwillingness to pay. However, it is difficult to predict future trends since relatively few RCRA facilities have yet had to face the expensive later stages of corrective action.

Question: In the last two years EPA has used some Superfund money to begin assessing the need for corrective action at hazardous waste facilities. How will the planned fiscal year 1991 decrease in Superfund pre-remedial funds from $83 million to only $76.5 million impact on the assessment of these facilities? Will it have any impact?

Answer: The Agency does not expect the decrease in pre-remedial funds to have an impact the assessment of RCRA facilities.

Congressman Traxler

FEDERAL FACILITY COMPLIANCE

Question: How would you rate Federal Facilities compliance with environmental laws?

Answer: Federal facilities have an obligation to comply fully with all Federal environmental laws and regulations in the same manner and degree as all other regulated entities. It is the goal of the Environmental Protection Agency (EPA) to have Federal facilities achieve compliance rates equal to or better than the compliance rates of private industry. Federal facilities do have environmental compliance problems. EPA has successfully negotiated and implemented Federal facility compliance agreements with the Department of Defense (DOD), Department of Energy (DOE), Department of Agriculture and the National Aeronautics and Space Administration (NASA).

Question: How would you rate your enforcement actions against Federal facilities--particularly DOD and DOE contractor operated facilities?

Answer: It is EPA and the Department of Justice's position that private contractors operating government-owned facilities are accountable to the same extent as any other private operator for violations of environmental laws and regulations. EPA and the States will use the full range of enforcement authority under environmental statutes against contractor operators in the appropriate circumstances to achieve compliance at Federal facilities. EPA's Office of Solid Waste has issued a directive to the Regions and States that a contractor who is responsible or partially responsible for the operation, management or oversight of hazardous waste management activities at a Federal facility should sign the permit as an operator. EPA has also issued a directive to its Regional offices which strongly encourages the use of enforcement actions against non-compliant contractor operators at Federal facilities. Under RCRA, EPA has issued four enforcement actions against contractor operators at DOD or DOE facilities. In all four of these cases it was factually determined that the contractors had responsibility for the hazardous waste management activities at issue. EPA's policy has been successful in holding contractors accountable for compliance with Federal environmental laws and regulations.

Question: Did EPA issue a contractor enforcement policy in January 1990?

Answer: No. EPA did not issue a contractor enforcement policy in January, 1990.

Question: Will EPA issue a contractor enforcement policy, and if not, why not -- and if yes, when?

Answer: As stated in the EPA Federal Facilities Compliance Strategy, EPA is committed to issuing an enforcement strategy for Government-Owned Contractor-Operated facilities (GOCOs). The enforcement strategy for GOCOs is currently being reviewed internally by EPA. It is scheduled to be completed by September 30, 1990.

Congressman Traxler

HAZARDOUS WASTE RESEARCH AND DEVELOPMENT

Question: Regarding your hazardous waste research development funding -- which is increased by about $48,000,000 in FY 1991 -- The Science Advisory Review of the research dollars was quite critical of EPA's hazardous waste research program.

For example, it pointed out that communities are currently planning, constructing, or operating almost 300 incinerators costing up to $100 million each -- representing a $17 billion investment -- but that this investment is being undertaken without the kind of research on what the effect of these incinerators will be. The report states, "Additional research is needed to reduce these uncertainties, but this budget appears to be moving exactly counter to the required direction."

Do you agree with the conclusions of the Science Advisory Board?

Answer: As a result of certain non-recurring costs in FY 1991, the hazardous waste research funding level decreases by about $4 million in FY 1991. The overall hazardous waste budget increases by $48 million. However, despite a decrease in the hazardous waste research budget in FY 1991, funding for incineration research increases by $493K through internal shifts to address this priority area in accord with the Science Advisory Board recommendations.

Congressman Traxler

EPCRA RESOURCES

Question: I'm going to ask a question at this point about community right to know -- known as Title III -- although some parts of it are under the pesticides budget which we will be coming to in a minute.

Are my numbers correct in that the budget for 1991 decreases the community right to know program from $20 million to $17.8 million?

How would you rate the priority of this program?

Answer: Yes, your numbers are correct for the EPCRA program within the Office of Pesticides and Toxic Substances. The decrease in extramural dollars results from a 1990 Congressional add-on which the Agency did not assume for the FY 1991 budget.

FY 1988 through FY 1990 represented the start up years for the Toxic Release Inventory (TRI) program. The budgets for these years reflect the increased costs associated with program initiation. The FY 1991 budget represents a transition from a program initiation phase to a program operating phase. In developing an operating phase budget we hope to achieve greater economies and efficiencies in processing data and creating the Inventory. Our FY 1991 request anticipated these increased efficiencies.

Overall, the program is of high priority given the pollution prevention capability of the TRI data, especially at the Regional, State & local level.

Congressman Traxler

RADON ACTION PROGRAM

Question: On page 7-22, under the Radiation program you detail the Radon Action program. You are requesting $13,735,000 for this program in 1991 of which $10,388,000 is under Abatement, Control and Compliance.

You indicate that the EPA will complete data analysis for the National Survey of Radon in residences and issue a final report in 1991. Is that correct?

Answer: Yes. EPA does plan to issue the final report in 1991. The report will describe the design, implementation and data analysis phases of the survey, and present the survey results and conclusions.

Question: You also indicate that you will complete design of the National Survey of Radon in schools and initiate the survey which is targeted to high-risk areas. How would you rate on a risk assessment the relative priority of spending dollars on radon mitigation or on asbestos? Give us your sense of that. Which is the more serious problem?

Answer: In the 1987 report entitled "Unfinished Business: A Comparative Assessment of Environmental Problems," a committee of senior Agency scientists ranked radon in homes as the top carcinogenic problem facing EPA and the nation on the basis of its population cancer risk. We hope that the National Schools Radon Survey will provide information on the extent to which radon presents a problem in the nations schools.

Asbestos was not included in the "Unfinished Business" report. While we are conducting a major research effort to better determine the risk posed by asbestos, present evidence indicates that building occupants face a very low risk. However, maintenance and service workers in buildings may disturb materials and cause elevated asbestos fiber levels, especially for themselves, if they are not properly trained and protected. The relative risks of radon vs. asbestos in any given school building will vary depending on the condition of the asbestos materials and whether the school is located in an area of high radon exposure. We cannot at this time provide a quantitative measure of the relative magnitude of these risks nationwide.

EPA estimates that the cost to diagnose the cause of elevated radon levels and to mitigate those levels will be in the range of $5,000 - $10,000 for most schools. In large schools requiring extensive treatment, costs could run as high as $50,000.

Congressman Traxler

IDENTIFYING RADON RISK

Question: Do we understand correctly that your concept in connection with radon is that you're going to identify the risk and the high incidents locations -- but that it's a local responsibility to mitigate the problem?

Answer: Both the National Residential Radon Survey and the National Schools Radon Survey will characterize the national distribution of radon concentrations in homes and schools, respectively. These surveys will also identify areas with an increased probability of having elevated radon levels.

Radon is not primarily a Federal responsibility, although there is a Federal role. EPA's Radon Action Program is non-regulatory in nature. It focuses on providing information to the public so that people can make educated decisions and take informed action, and on developing the capabilities of the States and the private sector so that they can help the public address their radon problems.

Congressman Traxler

SUPERFUND CLEANUP - EUROPEAN STRATEGY

Question: Let me give you a little sense of what I think one of the core problems of the Superfund is. The basic problem is probably that it is inherently an adversarial program by nature. That, by the way, is a great benefit to the lawyers -- but my perception is that the cleanup technologies are sorely lacking and too expensive.

My understanding is that Europe is far ahead of us in cleanup technologies. Also I understand that only 10 to 15 percent of the Superfund sites present any health risks. That would suggest that we should concentrate on these sites -- get those cleanup -- and simply monitor the rest -- rather than trying to find permanent remedies which largely ends up in doing nothing but spending money.

That's my sense of the problem -- do you share that or disagree with it?

Answer: The Agency would agree that the Superfund program can be adversarial since one of its principal aims is determining joint, several, and strict liability for toxic wastes. When such liability is determined, litigation is one avenue to assigning responsibility and, by extension, cleanup costs.

It is the Agency's view that all Superfund National Priorities List sites pose an actual or potential health risk and, therefore, must be monitored, controlled, or neutralized.

Congressman Traxler

SUPERFUND CLEANUP SCENARIO

Question: If we were to follow the following program scenario in 1991 -- providing we could get some support for it within the Congress.

(1) Expand emergency removals -- the only part of the program that has been truly successful.

(2) Limit cleanups to the relatively few sites which have the potential for human health risks.

(3) Pump additional money into the research and development to find new and improved and cost effective technologies.

What would be your view of that scenario?

Answer: This scenario for emergency removals does not differ significantly from that proposed in the President's Budget. Emergency removals are a top priority and are conducted whenever necessary. Removal actions have been initiated at over 300 National Priorities List (NPL) sites since SARA was enacted. The Agency has recently finished formally assessing all NPL sites to ensure that any immediate actions necessary to make sites safe have been taken. A few additional removal actions have been identified as a result of this review and will be undertaken within available resources. However, most sites have been found to pose no immediate threat and additional removal actions are unnecessary.

Remedies to mitigate both potential and immediate threats to human health and the environment are initiated on a "worst sites first" basis. Although all NPL sites have actual or potential threats to human health, the Agency has established criteria for determining which are the worst. These criteria are based on the relative levels of risk to human populations, stability, exposure to human populations, and threat to endangered species of the contaminants at the site.

The Agency makes every effort to assure that, to the maximum extent possible, responsible parties are involved in site remediation efforts.

The President's Budget includes significant resources for research and development efforts that are focused towards finding new and improved cost effective technologies. The base research program and the Superfund Innovative Technology Evaluation (SITE) Program are being implemented to ensure that data influencing technology selection is available. Base research examines controlling factors and emissions which cannot be addressed on a site-specific basis. The SITE program provides a third party evaluation of technology capabilities. There are 38 technologies in the field demonstration program and 15 tests have been completed. Additional resources for the SITE program, as currently constituted, would not result in more field demonstration projects under the current statutory interpretation that limits grants to developers.

Congressman Traxler

SARA NEW REMEDIAL STARTS

Question: The Superfund Amendments and Reauthorization Act (SARA) requires 200 new remedial action starts in fiscal year 1991 -- and requires that 257 new remedial investigation/feasibility studies be commenced by October 17, 1989.

How many new remedial action starts are planned for fiscal year 1991, and how does that compare to the requirements of the law?

Answer: The Agency plans to begin 76 new remedial actions (RAs) in 1991, in addition to the 46 starts planned for 1990. This total of 122 actions will be counted against the SARA requirement to initiate 200 new RAs in 1990 and 1991.

Question: Was the deadline for completing 257 new RI/FS by October 17th met?

Answer: Yes, the Agency started 321 new remedial investigations/feasibility studies (RI/FSs) by October 17, 1989, thus meeting the SARA mandate to start 275 RI/FSs.

Question: Is it impossible to meet the legislatively mandated targets?

Answer: The Agency has met most of the major Superfund statutory deadlines. For example, the 275 RI/FS starts required by Section 116(d)(2) of SARA and the 175 RAs required by Section 116(e)(1) of SARA have been achieved. It is unlikely that the Agency will start RA at 200 new sites in 1990 and 1991, as required by Section 116(e)(2) of SARA. The Agency's progress on meeting this target has been adversely affected by resource limitations in 1989 and 1990. With the resources provided, the Agency will further its efforts to implement remedies at the sites which pose the highest threat to human health and the environment.

Question: Do the mandated targets make any sense?

Answer: The targets have been set for important areas in the program. However, mandated targets often have unintended side effects. For example, efforts to meet the RA start mandate detract from the Agency's goal to address worst sites first and establish a priority for remedial activities. In many cases, it seems that other methods to express the intent of Congress could accomplish the same result as legislatively mandated targets.

Congressman Traxler

SUPERFUND RESEARCH FUNDING

Question: The Office of Technology Assessment estimates that as much as $500 billion could be needed over the next 50 years -- $10 billion a year -- to clean up all Superfund sites -- unless there is a major technological breakthrough that could bring the cost of permanent remedies down.

Given this statement -- and by the way, do you agree with the numbers -- why does your budget request for Superfund research fall by 8.6 percent?.

Answer: The primary reason for the overall reduction in funding in Superfund research is related to the actions we took to implement the Superfund Management Review.

To implement the review, we took two types of actions. First, 25.5 FTEs and $2.5 million dollars were added in FY 1990 for an expanded technical support program to better meet the Agency's needs. This results in a 43% increase in staff devoted to the general area of technical support, to a total of 84 FTEs. This major expansion in the level of technical support is also continued into FY 1991.

Second, an initial investment of $12 million in extramural funds was added in FY 1990 to carry out other elements of the Superfund Management Review such as the Superfund Technical Assistance Response Team (START), treatability studies, and technology evaluation. While most of this investment is not carried over into the FY 1991 budget, the initial investment will enable us to make important progress in meeting a number of Superfund program needs. We intend to make a careful review of the activities undertaken with these resources, and then give appropriate consideration to supporting such activities in FY 1992.

While the overall budget request is down for the reasons noted above, we have requested some increases for selected programs which partially offset the decreases. Increases are requested for the following three important areas: Subsurface Cleanup and Mobilization Processes (SCAMP), quality assurance of field sampling, and assessment of ecological risks at Superfund sites.

Finally, with regard to the OTA estimate of $500 billion to clean up all Superfund sites, we would note that at present, our estimate for the cost of cleaning up the approximately 1200 sites on the current NPL list is about $20 billion dollars. We also estimate that the NPL list will grow to about 2100 sites by the year 2000.

Question: EPA may say that the decrease reflects the one time add-on in fiscal year 1990 for the Superfund Management Review. But that isn't the whole answer -- at $73 million, the fiscal year 1989 budget was higher than the fiscal year 1990 Budget Year request.

Answer: The amount obligated in the FY 1989 budget contained an "extra" $5 million carried over from FY 1988 for the Hazardous Waste Research Centers program. This extra amount funded the Centers program for a second funding cycle in FY 1989. After adjusting for this special circumstance, the appropriate FY 1989 level for comparison should be $68 million. Thus, the FY 1990 current estimate of $78.3 million and the FY 1991 request of $71.8 million are both higher than the adjusted level for FY 1989.

Congressman Traxler

SUPERFUND RESEARCH AND WORKER TRAINING PROGRAM

Question: The Superfund worker training program administered by the National Institute of Environmental Health Sciences is cut by 50 percent in the President's budget. The NIEHS research program is cut by 30 percent. Why is the Superfund program request going up by $209 million and you're still cutting these two programs?

Answer: Section 111(d)(12) of the Superfund Amendments and Reauthorization Act authorizes up to $10 million per year to support the Worker Safety Training Grants program administered by the National Institute of Environmental Health Sciences (NIEHS). In the appropriation process for 1990, Congress raised the ceiling in Section 111 for this program to $20 million and appropriated that amount. The 1991 President's Budget request is $10 million, the level requested in the previous four years, and is consistent with the Agency's needs for the worker training program.

In 1990, EPA requested $11.9 million to support the NIEHS research program. Congress approved $16.9 million for this program, a $5 million increase. The $11.9 million funding request in the 1991 President's Budget supports the level of research activity conducted before the one-time funding increase of 1990.

Questions Submitted for the Record by Congressman Stokes

HAZARDOUS SUBSTANCE RESEARCH CENTERS

Question: The 1986 legislation provides that a minimum of five (5) centers were to be established; therefore, it is possible for more centers to be established. Isn't that correct?

Answer: Subsection (D) of Section 209 of Title II of the Superfund Amendments and Reauthorization Act (SARA) provides for at least five but not more than ten university based hazardous substance research centers, to be equitably distributed across the country. However, the Act stipulates that not more than $5 million per year may be spent on the program from any year's trust fund appropriation. Further, when funds were appropriated to support this program in FY 1988, the appropriation was accompanied by report language which stated that not more than five centers would be established. Each of the five centers in place receives $1 million annually from EPA, which is the minimum which we believe is practical for a successful exploratory research center, particularly when the center is required to perform training and technology transfer activities in addition to research, as SARA requires of these centers.

Congressman Stokes

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES (HBCU) - SARA PROGRAM

Question: Have you given this issue any thought? What action has been taken to involve HBCU's in the SARA program, as authorized under Section 209 of the 1986 law?

Answer: When the program was initially publicized in 1988, copies of the solicitation were distributed to all of the Nation's historically black colleges and universities, as part of the Agency's standard program advertising procedures. When HBCUs contacted EPA, staff answered their questions, sent additional information when requested, conducted personal meetings with potential applicants, if requested, and assisted in numerous ways including referrals to other institutions which may have been interested in forming consortium arrangements. Of the 33 proposals received from around the country, two involved participation by an HBCU.

It is also worth noting that the national competition to establish these centers was open to all U.S. universities, including HBCUs. One HBCU, Howard University, is among the 22 universities comprising the hazardous substance research centers program.

Congressman Stokes

HAZARDOUS SUBSTANCE RESEARCH CENTERS FUNDING LEVELS

Question: What level of funding was appropriated in fiscal years 1988 through 1990 for the participating centers? Please provide a breakdown.

Answer: For each of the fiscal years, 1988 through 1990, $5 million was appropriated for the hazardous substance research centers program. EPA has provided a total of $5 million ($1 million to each center) from each year's appropriation. The breakdown is as follows:

	APPROPRIATION (in millions)		
LEAD INSTITUTION	FY 1988	FY 1989	FY 1990
New Jersey Institute of Technology	$1.0	$1.0	$1.0
University of Michigan	$1.0	$1.0	$1.0
North Carolina State University	$1.0	$1.0	$1.0
Kansas State University	$1.0	$1.0	$1.0
Stanford University	$1.0	$1.0	$1.0
Total	$5.0	$5.0	$5.0*

*Each center will actually receive only approximately $985,000, due to the Gramm-Rudman-Hollings provisions.

Congressman Stokes

HEALTH EFFECTS RESEARCH

Question: Are any of these centers doing research on health effects research and risk assessment associated with hazardous substances? It is my understanding that these are areas which are not being adequately covered by the existing centers.

Answer: None of the five EPA sponsored hazardous substance research centers is charged with performing health effects research. However, section 311(a) of CERCLA, as amended by SARA, provides for funds to be passed through to the National Institute for Environmental Health Sciences (NIEHS) to support a basic research and training program to detect, assess, and evaluate human health effects and risks from hazardous substances. The FY 1991 President's Budget includes $11.9 million for use by NIEHS to support health effect research on hazardous substances.

Congressman Stokes

EPA FUNDS DIRECTED TO HBCU'S

Question: In other areas, has the Agency made any substantial use of HBCU consortia which can play significant roles in research and education?"

Answer: The Agency and the Office of Research and Development (ORD) is expanding its use of Historical Black Colleges and Universities (HBCU) consortia. The targeted-access available by dealing at the consortia level is much more efficient in matching Agency needs with HBCU skills and knowledge to the benefit of both parties. Examples of significant consortia contact are below:

On April 10, 1990, Administrator William K. Reilly and Agency representatives, including, John Skinner, the Deputy Assistant Administrator for Research and Development, met with representatives from the HBCU/MI Hazardous Materials and Waste Management Consortium. Administrator Reilly suggested that the Consortium work closely with the Office of Research and Development to secure further opportunities in research and development. Many of ORD's outreach activities involve educational opportunities concurrent with research activities.

ORD, the Office of Administration and Resources Management (OARM) and the Office of Civil Rights (OCR) are exploring the potential of a partnership with the National Association of Equal Opportunity in Higher Education (NAFEO), a consortium of HBCU's, to sponsor workshops for up to twenty-five consortium members to discuss, among other things, methods to increase the number of research proposals submitted to HBCU faculty; how to properly prepare such proposals to receive full consideration; ways to involve more minority students in EPA fellowship and intern programs; and a program to increase cooperation in EPA's minority recruitment efforts. The Consortium would receive a $78,000 grant to sponsor and administer the conference.

Howard University is a member of a consortium which comprises one of five Hazardous Substance Research Centers (HSRC). This particular center, consisting of the University of Michigan, Michigan State and Howard, receives $1.0M annually through FY 1997. Howard University shares proportionately.

Question: Please provide for the record answers to the following questions: What amount and percentage of EPA funds have been provided to HBCU's? Please provide a breakdown of the programs, and compare these numbers to the level of funding provided to predominantly white institutions?

Answer: The range of direct support provided by the Agency comes not only in the form of dollars, but also encompasses various outreach and support programs that provide educational positions, research opportunities and equipment. The Office of Research and Development participates fully in all forms of support. The following table shows the breakdown for FY 1988 and 1989 of EPA's support to higher education institutes with a percentage of support to HBCU's. A listing of HBCU programs, which are supported by EPA, follows:

	Higher Education Institutions	HBCU's	% to HBCU
FY 1988	$64.5M	$1.5M	2.3
FY 1989	$78.9M	$1.9M	2.4

Minority Institution Assistanceship Program

This program provides assistance in the form of grants to individuals from an approved list of minority institutions. For FY 1990, this program supports 5 renewals and 3 new research grants.

Minority Institution Student Fellowship and Summer Intern Program

The program is designed to assist students in the pursuit of careers in the environmental sciences by providing $6K per year per student for the payment of tuition, fees, books and a stipend at an approved minority institution in an approved course of instruction. After completion of a fellowship appointment, a summer intern appointment may be offered to program participants to work on environmental projects in EPA research laboratories. For FY 1990, ORD is supporting 23 fellowships and 10 summer interns.

Minority Engineering Program

This is a cooperative agreement with the University of Nevada at Las Vegas to provide engineering students with training projects and assignments associated with environmental issues and research problems.

Minority Research Apprenticeship Program

This is a summer employment program which allows minority high school students to work with laboratory researchers in an effort to develop interest in scientific, engineering and technical studies.

HBCU Linkages

Senior scientists and engineers in ORD laboratories have been named as adjunct professors in their areas of expertise for the purpose of providing laboratory work experience for science and engineering students in Historically Black Colleges and Universities. This program also provides a source for minority recruitment.

Congressman Stokes

"FAIR SHARE" OF LUST

Question: There are businesses in my Congressional district, as well as across the nation which are interested in participating in the agency's Leaking Underground Storage Tank programs. In fact, it is my understanding that the LUST training program has shown good results. Unfortunately, it appears that recent developments may impair the ability of minority contractors to compete in this emerging field. While the graduates of the training program are receiving offers for tank removals/replacements from private industry, opportunities with the public sector are not as bright.

Much of the problem can be summarized as a lack of authority resulting from action taken by OMB (see OMB circular A-102). Basically, OMB is permitting States receiving Federal financial assistance to use their own procurement systems (and their own policies) in making awards to carry out the Federal programs. It is unclear as to whether the States have what is commonly known as a "fair share" policy, a policy which provides funds to minority- and women-owned businesses. Moreover, the status of these programs is unclear considering the Croson decision, which created considerable confusion over what constitutes a legal State Minority Business Utilization program.

The EPA has been able to apply the "fair share" policy to the Superfund and Water programs. Considering that the Underground Storage Tank program offers the most lucrative contracting opportunities, and will allow many entrants to bid as prime contractors, it is unfortunate that this program is not covered by "fair share."

What steps can be taken to apply the "fair share" concept to the Underground Storage Tank program? And, how is EPA dealing with this issue?

Answer: Inasmuch as the Underground Storage Tank program operates under the Agency's general procurement regulations for financial assistance under CFR 40 Part 31 Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, it is subject to the provisions of OMB Circular A-102 that provides for States to use their own procurement provisions. Most States do not have a socioeconomic "fair share" policy.

Congressman Stokes

"FAIR SHARE REPORTING FORMS/MINORITY BUSINESS AWARDS"

Question: In addition to the above referenced "fair share" concerns, it appears that the participation of minority firms in EPA activities may be impaired by another OMB directive.

As you know, OMB must approve all Federal agency reporting forms. EPA uses SF-334 (Department of Commerce) to gather data from financial assistance recipients on their use of minority and women businesses, so as to meet their negotiated "fair share" objectives. Originally, EPA used its own OMB approved reporting form (1983-1984) until the Minority Business Development Agency (MBDA) of the Department of Commerce created (per EPA's encouragement) a standard reporting form for all Federal agencies. This form, unfortunately expires April 30, 1990, with a six-month grace period.

Now MBDA (who EPA reports the data to) is reluctant to seek a renewal for use of the form. They say OMB has told them not to try.

How will this development affect minority businesses? Isn't it true that without the form, recipients cannot, and therefore will not report? Doesn't this put billions of dollars in awards to minority business enterprises in jeopardy? And, will the absence of this reporting mechanism impact executive order 12432? Please explain how.

Answer: Executive Order 12432 and the accompanying implementation instructions from the Secretary of Commerce requires all Federal agencies with substantial grant-making authority to put into place annual minority business development plans for minority business development and report quarterly thereon. Without an approved reporting form, we believe grant recipients would find it difficult to carry out a "fair share" program and report on it. It is our understanding, however, that the Minority Business Development Agency (MBDA) is requesting an extension from OMB for use of Standard Form 334.

Since 1984, EPA has awarded over $2 billion to minority and women's businesses under this program.

Congressman Stokes

MINORITY AND WOMEN'S BUSINESS TRAINING

Question: How are the minority and women's business training programs coming along? I understand that there is a high level of interest among minority and women-owned firms to participate in the Superfund, Leaking Underground Storage Tanks, Asbestos, and other training programs. The turn-out has been good. Considering the success of these training programs, I am interested in knowing how many of those persons or companies participating in the training programs have gone on to actually receive a contract or grant from the EPA or its awardees. Please list the firms, their locations, and the amount of the award.

Answer: Interest and enrollments in the Agency's environmental training programs remains at a high level. Participants give high marks to the course instructors and vice versa. One hundred percent of the Asbestos enrollees have passed a tough certification test qualifying them to become licensed by their States (if required) and bid on EPA/State funded projects. Similarly, the same applies to trainees completing the Underground Storage Tanks Program and Superfund Training Programs.

While we know of a good number of firms that have been successful in gaining awards as the result of their training, we have not officially tracked that information. We do try to maintain contact with the graduates of the program to refer them to potential contracting opportunities and assist them if they have problems. We will be working with our National Training Contractor to identify firms that have received business as a result of the training programs.

Congressman Stokes

OFFICE OF SMALL AND DISADVANTAGED BUSINESS

Question: In previous years, I have had language in the conference report which directed the Office of Small and Disadvantaged Business Utilization (OSDBU) to be given workyears needed to coordinate (and manage) the training programs that are intended to promote the increased utilization of minority contractors. I have been told that the Agency was assessing the staffing needs for this office. Please tell me the results of that assessment and if it resulted in any additions to the OSDBU's small staff.

Answer: In recent years OSDBU has been supplemented by an increase in funding to support additional Senior Environmental Employees to enable OSDBU to meet its on-going responsibilities. While the number of FTEs has remained the same over the past few years, this additional Senior Environmental Employee support has enabled OSDBU to successfully carry out its mission.

Congressman Stokes

SEWER PROJECTS

Question: There is some concern over the reduction in funding for the sewer construction grant program. The Agency's request of $1.6 billion for the construction grants appropriation in 1991 represents a decrease of $391,720,000 (20%) below the 1990 current estimate. Part of the reduction, I understand, is attributable to the fact that direct grants to State and local authorities are being replaced by the State Revolving Loan Fund (SRF). Under this program, EPA makes capitalization grants to the States which are in turn loaned by the States to their political subunits to finance water treatment construction. When cities and counties repay these loans, the SRF is replenished and perpetuated. Phasing-out the direct grant program is consistent with the 1987 Clean Water Act Amendments.

How will this reduction impact sewer projects? Potentially, how many projects could be affected by this reduction? What impact would the proposed reduction have on the State of Ohio?

Answer: Assuming the allotment formula remains unchanged and the Federal funds are decreased $391,720,000, the reduction would account for a total of 70 less projects nationally if State and local governments choose not to take a more prominent role in financing wastewater treatment. Ohio's share of the reduction would amount to 4 projects.

Congressman Stokes

STATE REVOLVING LOAN FUND AND THE DISTRICT OF COLUMBIA

Question: Officials in the District of Columbia have expressed some concern over the affect the SRF program will have on its operations. The District and U.S. Territories are in a unique situation because they have no political subunits. The SRF loan and interest repayment procedure means they would have to charge themselves interest, which would be inefficient and inappropriate. I know efforts are under way to exempt the District from the SRF requirements. I believe Congressman Green has contacted your office regarding this issue.

I just need to clarify for the record what your position is on exempting the District. It is my understanding that the Agency would support exempting the District and U.S. Territories. I know, ultimately, it will be left to this Committee to draft the necessary language for inclusion in the FY 1991 Appropriations bill.

Answer: The Administration has supported an exemption for the Territories but is not in favor of an exemption for the District of Columbia. The FY 1990 Appropriations Act (PL 101-144) exempted the District and the Island governments from using the FY 1990 appropriations for their SRF programs. The bill allowed them to use their SRF allotment as Title II direct grants. The District and the Island governments do not have EPA-approved SRF programs. The District would not have to charge interest of loans from its SRF to the local sewage treatment agency, which incidentally, also serves localities in Maryland and Virginia.

Congressman Stokes

ASBESTOS REGULATIONS

Question: Regarding asbestos-in-buildings, it is my understanding that the Agency has not promulgated regulations governing asbestos in public and commercial buildings. Why has the Agency failed to act on this issue, particularly in light of the ban on asbestos announced last July?

Answer: The Asbestos Hazard Emergency Response Act (AHERA), passed in 1986, required that EPA study the problem of asbestos in public and commercial buildings and prepare a report to Congress on its findings. EPA presented that report to Congress in February 1988.

The Agency report to Congress does not preclude an asbestos regulatory program for public and commercial buildings in the future, and EPA is committed to further study of the issue.

In this report, EPA recommended that a comprehensive regulatory program, such as that for schools, not be established for asbestos in public and commercial buildings. The numbers of buildings involved (potentially hundreds of thousands) would exceed the capacity of the existing trained and accredited abatement professionals and draw away from abatement efforts in schools. The costs of a public and commercial building program and the roles of the state and local governments and the private sector in this kind of program need to be carefully investigated and determined. The regulatory activities of OSHA and EPA under NESHAP also need to be considered.

Finally, it is important to note that the ban on asbestos announced last year applies to the current and future manufacture, processing, importation or distribution of asbestos-containing products, not to the existing presence of asbestos materials in buildings.

Congressman Stokes

FUNDING FOR ASBESTOS IN SCHOOLS

Question: On 9-1 of the justification, I see that the Agency recommends that the Abatement, Control and Compliance account be cut in half -- from $92 million to $46 million. Much of this reduction has been borne by the asbestos-in-schools program (which has been discontinued), and the asbestos-in-buildings program (which was cut from $10.7 million to $6.2 million). I understand the Agency still has to conduct close-out evaluations on Asbestos School Hazard Abatement Act (ASHAA) loan and grant projects awarded in 1987 through 1989 and monitor projects awarded in 1990. The Agency will also be providing technical assistance and guidance documents to assist schools in complying with Asbestos Hazard Emergency Response Act (AHERA) rules.

In order to conduct these asbestos-in-schools activities, funds will have to be provided. Since there are no funds requested under this category of the justification, how will the Agency fund the close-out evaluations, the AHERA assistance, and related projects? Will funds be used from the Asbestos-in-Buildings account, or any other accounts? Please explain, and provide a breakdown of the level of funding to be provided for these various activities in FY 1991.

Answer: The Agency has a strong asbestos-in-buildings program, which includes asbestos-in-schools activities and other asbestos activities. The apparent cut in funding for the Asbestos-in-Buildings program between 1990 and 1991 results from a Congressional add-on to the 1990 budget that the Agency did not assume for the 1991 request. Absent this add-on, the underlying budgeted amount for the Asbestos-in-Buildings program actually increases slightly between 1990 and 1991.

In 1991 EPA will budget $350,000 to monitor approximately 2,400 projects funded under the ASHAA loan and grant program since 1985. In addition, $1.3 million supports our senior environmental employment program with the American Association of Retired Persons (AARP) for technical assistance, field projects monitoring and close-out of these ASHAA projects.

After much start-up and technical assistance activity from 1987 through 1990, EPA has addressed the need for new guidance documents for the Asbestos Hazard Emergency Response Act (AHERA). Last year the states reported that 94% of the nation's schools had completed AHERA inspections and had developed asbestos management programs, which were to be implemented beginning July 1989.

Congressman Stokes

ASBESTOS REGULATIONS: EPA & OSHA DISCUSSIONS

Question: What is the status of EPA-OSHA discussions regarding asbestos regulations, specifically as they pertain to worker protection standards? When will the Agency be acting on this issue?

Answer: EPA and the U.S. Occupational Safety and Health Administration (OSHA) have undertaken several actions to increase worker protection.

OSHA has revised its asbestos standards affecting private sector worker on several occasions in the past two years. These standards have been strengthened for both asbestos abatement workers and service and maintenance workers in buildings. EPA has pledged to follow suit by revising regulations to strengthen corresponding standards for public sector workers not covered by state programs. In addition, EPA's asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) is currently being revised. The asbestos NESHAP, although intended to protect the public at large, also improves protection of workers.

EPA and OSHA, in conjunction with other governmental and private sector groups, have participated in an EPA-sponsored dialogue this past year to determine whether any additional regulatory action should be taken to control exposure in public and commercial buildings. The discussions have included yet additional worker protections. We expect a report from the dialogue facilitator, the Conservation Foundation, in the next few months. The report will outline the recommendations of the participants.

One major EPA project supported by the dialogue is a new in-place management guide, which will be published by the Agency later this summer. The guide will set operations and maintenance procedures for controlling asbestos exposure in buildings, including proper work practices and worker training.

Congressman Stokes

ASBESTOS ENFORCEMENT ACTIONS

Question: How many enforcement actions were taken by EPA regarding asbestos under NESHAPS and AHERA in the last year? How much personnel time, and what level of funding did these actions require?

Answer: In FY 1989, the Environmental Protection Agency (EPA) issued 141 administrative orders for asbestos under the National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 asbestos NESHAP cases were referred to the Department of Justice and EPA began 15 pre-referral negotiation actions. In addition, 28 cases were filed in federal court and 23 cases were concluded by consent decree. For criminal enforcement, 7 asbestos cases were referred to the Department of Justice.

On October 12, 1989, management plans were due from local education agencies (LEA) throughout the nation. A portion of these LEAs received deferrals until May 5, 1990. As part of this program, warning letters (Notice of Non-Compliance (NON) were sent regarding 6,960 facilities that were not in compliance. In addition to the NONs, 51 civil complaints were issued by EPA under the Asbestos Hazard Emergency Response Act (AHERA).

The combined total of legal and technical support for these enforcement actions was 85 FTEs and $2.3 million.

Congressman Stokes

LEAD PLANS

Question: What does EPA plan to do during FY 1991 regarding lead in paint, soil, water, and plumbing?

Answer: In 1991, EPA's Office of Pesticides and Toxic Substances will continue lead-based paint studies begun in 1990. The studies are being conducted jointly with the Department of Housing and Urban Development (HUD) under terms of an EPA/HUD memorandum of understanding. OPTS will provide technical assistance to HUD on conducting a lead-based paint abatement demonstration project and a national lead paint survey, and analyzing and interpreting data obtained by HUD.

The EPA Superfund program will focus on two areas with respect to lead in 1991. EPA will respond to releases or threats of releases of lead contamination at Superfund sites. The Superfund program addresses such releases or threats in all media (i.e., air, water or soil) at each site. Second, Superfund will conduct research studies on lead in urban soil, addressing the impact of soil lead removal on lead blood levels in children.

Under the Lead Contamination and Control Act, which identifies and remedies sources of lead contamination in water coolers and other outlets located in schools, day care centers and other local education facilities, EPA's Office of Drinking Water will focus in 1991 on developing effective state programs. Major activities will be technology transfer and state-level training. Outreach activities will be maintained.

Effective June 1988, the lead ban restricted solder and pipe content to 0.2% lead and brass faucets to 8% lead. Per the statutory language, states are responsible for implementation and enforcement of the ban. In 1991, EPA's Office of Water will provide technical assistance to states and oversight through the state grant mechanism to ensure state implementation.

Research programs oriented toward exposure reduction to lead in paint and soil were initiated in FY 1990 and will continue in FY 1991. These include paint and soil abatement, exposure pathway measurement, and health and safety criteria. The research is directed toward providing guidelines for abatement and cleanup levels. Research is also underway on lead in drinking water distribution systems. These programs focus on reducing exposure by inhibiting corrosion, and will support the regulatory efforts of the Office of Drinking Water.

Also in 1991, EPA's Office of Toxic Substances, Office of Air and Radiation, Office of Solid Waste and Emergency Response, office of Research and Development and Office of Policy, Planning and Evaluation will initiate a pollution prevention program to reduce health risks presented by lead. The goal of the program is to reduce lead use wherever feasible and to reduce exposure to lead in unavoidable uses. Among the options this project will consider will be to: limit mining of virgin lead; encourage recycling of lead-containing products (particularly batteries); and encourage use of lead substitutes.

Question: When will EPA promulgate new regulations in lead?

Answer: Promulgation of a new national ambient air quality standard for lead is planned for FY 1991. The drinking water standard is also planned for that year. There are no regulations planned for lead in paint and soil, however the Office of Solid Waste and Emergency Response has published interim guidelines for soil cleanup, and guidelines for paint abatement and abatement clearance procedures have been issued.

Question: What is the status of materials containing lead as "hazardous waste?"

Answer: Language contained in the 1990 appropriations language for EPA requires the Agency to provide a report to Congress concerning the handling of solid waste generated by lead abatement activities. The report will provide Congress with estimates of the fraction of waste so generated that is considered "hazardous waste," using certain technical criteria. EPA's Office of Toxic Substances will use data generated by the Department of Housing and Urban Development (HUD) in testing solid waste produced in HUD's lead-based paint abatement demonstration project for the report. EPA expects to provide an interim report by June 1990 and a final report by late August 1990.

Congressman Stokes

US ARMY CORPS OF ENGINEERS

Question: _What is the role of EPA and the Army Corps of Engineers at Superfund Sites?

Answer: The United States Army Corps of Engineers (USACE) has provided various support to EPA under the Superfund program since 1982. The USACE has a mission assignment to provide technical assistance (TA) and to conduct redemial design (RD) and remedial action (RA) on assigned projects. This covers both Federal-lead and Enforcement-lead efforts.

Under TA, USACE may be requested to review studies, be a technical expert, or have an on-site presence for EPA. For RD and RA, EPA has developed general guidelines for the Regions to determine appropriate Federal-lead assignments to USACE.

For Federal-lead RA projects greater than $15 million, there is a strong preference for the Region to assign the RD and RA to the USACE. For RA projects between $5 and $15 million, Regions are encouraged to assign the RD to USACE with design assignments made either to USACE or EPA contractors. For RA projects below $5 million, EPA is using contractors for many RA and RD assignments, although USACE is also used in some cases.

For Enforcement-lead projects, EPA makes case-by-case assignments to USACE. Oversight of enforcement RD and RA activities is growing under Superfund. EPA is encouraging the Regions to assign a greater percent of these activities to the USACE.

Question: Does EPA inspect sites which the Corps is overseeing?

Answer: Yes, when the USACE is overseeing a project, EPA retains responsibility for compliance with the Record of Decision, protection of human health and the environment, and the project's schedule and budget. The EPA Remedial Project Manager (RPM) and the USACE project manager work closely throughout the project to keep each other abreast of developments at the site. EPA RPMs are expected to visit sites periodically where the USACE is managing the design and/or construction activities.

Question: Does EPA train Corps personnel?

Answer: Yes, EPA and the USACE have Superfund training available. The agencies have opened their courses to each other in an effort to maximize the number of staff trained.

Congressman Stokes

Question: Has EPA cited the Corps?

Answer: EPA has not cited the USACE for non-compliance with Superfund at a civil works project. Any citation for non-compliance at a current or former Department of Defense (DOD) military installation for which the USACE is overseeing toxic and hazardous waste cleanup activities on behalf of the Army, or another Service Branch, would be issued not to the USACE, but rather to the DOD office responsible for the contamination.

Question: What resources will EPA devote to Superfund enforcement in FY 1991?

Answer: EPA proposes to devote $212 million and 1,445 work years to support Superfund enforcement. This includes $32 million allocated to the Department of Justice through an Interagency Agreement for litigation support.

Congressman Stokes

EPA AND FEDERAL FACILITIES

Question: What is the role of EPA at the Department of Energy Facilities?

Answer: The Environmental Protection Agency (EPA) and States are responsible for regulating the Department of Energy (DOE) facilities to ensure compliance with Federal environmental laws and regulations, respectively. EPA and the States are also involved in the oversight of cleanup at the "DOE weapons complex/facilities" (this includes 17 major productions facilities in 12 States) under the Comprehensive Environmental Response, Compensation and Liability Act and the Resource Conservation and Recovery Act.

Question: What penalties has EPA assessed against DOE or its contractors?

Answer: EPA has not assessed any penalties against DOE. EPA has proposed a penalty of $330,500 in a December 18,1989 amended complaint against Westinghouse, the contractor-operator of the Feed Material Production Center (Fernald site) in Fernald, Ohio.

Question: Does EPA participate on DOE "Tiger Teams"?

Answer: EPA is generally asked by DOE to participate on its "Tiger Team" reviews. EPA's participation is determined on a case specific basis. The EPA Regional offices make the decision whether or not to participate.

Question: What resources will EPA devote to DOE facilities in FY 1991?

Answer: EPA has not historically budgeted resources for each agency, nor has EPA specifically broken down statute staff resources devoted to Federal facilities work by statute. The exception is the Superfund program, where EPA has specifically allocated $ 14.9 million and 106 Full Time Equivalents (FTEs) in FY 1991 to negotiate and do oversight of CERCLA agreements for Federal facilities on the National Priorities List.

Questions Submitted for the Record by Congresswoman Boggs

LOUISIANA WETLANDS

Question: The preservation and restoration of wetlands is of enormous importance to Louisiana. As you know, our State contains about 40% of the Nation's coastal wetlands, but experiences 80% of the annual loss. No single cause can be pointed to as the culprit, but human induced causes, such as levee building and energy extraction, as well as natural causes, such as deltaic subsidence, have contributed.

President Bush has endorsed a policy of "no net loss" of wetlands. Can you tell us what exactly this means?

Answer: The President's goal of "no net loss of wetlands" is related to the goal originally established by the National Wetlands Policy Forum, that "the Nation establish a national wetlands protection policy to achieve no overall net loss of the Nation's remaining wetlands base, as defined by acreage and function, and to restore and create wetlands, where feasible, to increase the quality and quantity of the Nation's wetlands resource base." The President's "no net loss" goal means we need to establish a balance between losses of our wetlands base and gains in that base achieved through wetlands protection, restoration and, where possible, creation. In addition to achieving an equilibrium in our physical inventory of wetlands, the goal requires that we avoid degradation of wetlands caused by physical and biological disturbances. The goal does not mean that individual wetlands will be untouchable or that the no net loss standard will be applied to every permit. However, it clearly calls for a marked departure from our past practices, which led to an annual loss of hundreds of thousands of acres of U.S. wetlands.

The President has established an Interagency Task Force on Wetlands under the Domestic Policy Council, which will make recommendations on how to implement the President's goal.

Congresswoman Boggs

LOUISIANA WETLANDS

Question: A revision to the MOA with the Army Corps of Engineers allows exemptions to wetlands restoration when there are "insignificant environmental losses." How will this be determined, and who will make this decision?

Answer: The Mitigation MOA allows for a deviation from the mitigation sequence of avoidance, minimization, and compensation when EPA and the Corps agree that the proposed discharge would result in insignificant environmental losses. Although the Mitigation MOA does not provide an explicit definition of "insignificant environmental losses," it is our intent that this deviation be applicable only when reviewing the most minor and routine permit applications (i.e., those proposed discharges which are not likely to result in adverse impacts to the aquatic environment). At this time, we do not intend to provide additional formal guidance to EPA Regional staff regarding this matter. However, we will closely monitor implementation of the Mitigation MOA and issue supplemental guidance, if necessary.

Congresswoman Boggs

LOUISIANA WETLANDS

Question: EPA is currently assisting States in determining the feasibility of assuming administration of the Section 404 program or developing State wetlands protection programs. Is this an effort to get States to bear more responsibility for these programs?

Answer: Since the early 1980s, EPA has encouraged development of State wetlands protection programs. EPA has long recognized the crucial role States can play in protecting the Nation's wetlands, and has worked with States to develop their interest, authority, and capability to assume the Federal Section 404 Clean Water Act permit program or to develop alternative wetlands protection programs. The funding for the first year of this grant program was approximately $1 million. These funds are to support development of new wetlands protection programs or refinement/enhancement of existing wetlands protection programs. We are extremely encouraged by the enthusiastic response to this new grant initiative. We received over 65 applications from 35 States and several Indian Tribes for projects totalling over $5 million. The Administration's budget request for this program for FY 1991 is $5 million.

Congresswoman Boggs

LOUISIANA WETLANDS

Question: The State of Louisiana has expressed an interest in re-routing nonpoint source discharges into coastal wetlands to offset salinity intrusion, improve the quality of water reaching oyster reefs and fishery grounds, and to enhance the growth of wetlands vegetation. Optimizing the use of freshwater runoff in this manner could solve a number of problems simultaneously and could offer an important remedy for wetland loss in coastal areas where riverine sources of freshwater and sediment are not available. Could you comment on this strategy?

Answer: Many wetlands have the capacity to improve water quality by taking up nutrients (phosphorus and nitrogen) and by filtering out sediments found in runoff. However, there is still much we do not understand about a wetland's capacity to absorb pollutants, increased water velocities, and increased water volumes without damage to its natural chemical and biological properties. In addition, we are concerned about runoff into wetlands which contains contaminants which are persistent or which bioaccumulate in wildlife. Thus, although we believe the concept has merit, additional research is necessary to identify the conditions under which such an approach is appropriate.

We recognize the significant problems of inadequate freshwater and sediment to help replenish Louisiana's coastal wetlands and slow down the rapid rate of loss. EPA is providing a $30,000 grant to Louisiana's Department of Natural Resources to help them identify potential sources of freshwater runoff and to set up a research design to establish demonstration projects and monitor the results. This project is part of EPA's new grant program to support State efforts to improve or develop new wetlands protection programs. Some of the projects to be funded, such as that in Louisiana, will help States to better define the conditions and water quality standards needed to protect and restore our wetland resources, while also benefitting from their water quality improvement function.

Congresswoman Boggs

FUNDING FOR ATSDR

Question: I understand that ATSDR's initial request for Fiscal Year 1991 was $60 million, that this was reduced by the EPA to $48.4 million, and then further reduced by OMB to $45 million. Since ATSDR has a number of responsibilities under the Superfund program, including health assessments at sites to be added to the National Priorities List, won't these reduction adversely affect the agency's ability to perform these functions in a timely manner? After consulting with ATSDR, please provide information describing exactly how these reductions will affect the agency?

ANSWER: The $60 million funding level requested by the Agency for Toxic Substances and Disease Registry (ATSDR) reflects the authorization level in CERCLA. EPA reduced ATSDR's budget request to $48.4 million to reflect the universe of activities planned by EPA in FY 1991. The President's request of $44.5 million is in line with funding for ATSDR in FY 1989 and FY 1990.

The primary activities affected by the level of funding requested in the President's Budget are the performance of health assessments and toxicological profiles. Other changes between the EPA request and the President's Budget are minor and offset each other.

Under Section 104(i)(6)(A) of CERCLA, ATSDR must conduct health assessment for sites on the National Priorities List (NPL) within a year of listing. Under Section 104(i)(3) of CERCLA, ATSDR must produce toxicological profiles at rate of no fewer than 25 per year. The President's Budget for FY 1991 provides funding to conduct 60 health assessments, on the 125 sites that EPA estimates might be listed on the NPL in FY 1991, and 40 toxicological profiles. Funds can be reprogrammed from toxicological profiles to health assessments, however, if that proves necessary.

Congresswoman Boggs

FUNDING FOR NIEHS

Question: Please provide similar information about NIEHS' request as well.

Answer: NIEHS requested a total of $39.9 million for FY 1991. A request of $10 million was made to support the Worker Safety training grants program and $29.9 million was requested to fund university research.

The FY 1991 OMB and President's Budget request for the Worker Training grants program was $10 million. There was no change from the initial NIEHS request. This funding level is sufficient to continue the training program currently in existence.

The $29.9 million NIEHS request for university research was reduced to $12.9 in the OMB request and to $11.9 in the President's request. At the President's Budget level, current studies are continued but, no new studies are planned.

Questions Submitted for the Record by Congressman Mollohan

CLEAN AIR ACT AMENDMENTS

Question: Looking at the Clean Air Act amendments, just for a moment: what are your most up-to-date estimates of job displacement under the Senate bill and the House bill? I would appreciate your supplying the most detailed information you have for the record and, if possible, sending that same information directly to my office.

Answer: Under both the House and the Senate bills there are three titles where job displacements are possible, the acid rain non-attainment, and air toxics titles.

Under the acid rain provisions of both bills, the nation could experience shifts in coal production -- more low sulfur coal being mined in central and southern Appalachia and the West and less high sulfur coal being mined in northern Appalachia and the Midwest. However, no net loss of coal mining jobs are expected under the current versions of the bills.

Under the air toxics title of each bill, sources of air toxic emissions that have high levels of risk remaining after the application of first phase technological controls may be required to alter operations significantly if that source is unable to reduce risk levels to amounts specified in each bill. The provisions in question are called the "residual" risk provisions.

Under the Senate residual risk provisions, sources unable to reduce the level of risk to the maximally exposed individual to below a 1 in 10,000 chance (1 x 10-4) of contracting fatal cancer would be forced to close. This residual risk determination would occur approximately in the year 2005. The current House bill contains no "bright-line 1 x 10-4" standard and provides more flexibility in implementing residual risk controls. Therefore, the House bill would potentially impact fewer jobs.

It should be emphasized that predicting the employment impact of residual risk provisions that will not be implemented for another 15 years is extremely difficult given the changes in pollution control technology, production technology, and risk estimation methodologies that will certainly take place in the interim.

It should also be noted that job losses may result simply in shifts of jobs from older facilities with high levels of uncontrollable emissions to newer cleaner facilities.

Congressman Mollohan

WATER QUALITY ACT, SECTION 307

Question: Section 307 of the 1987 Water Quality Act authorizes modification of effluent limitations for various pollutants from coal remining operations on a case-by-case basis. In a July 19, 1989, letter to my West Virginia colleague, Congressman Rahall, who chairs the Mining Subcommittee, you indicate that the pertinent regulations -- quote -- "will appear as part of a larger package of regulatory revisions currently scheduled for proposal in the Fall of 1989." The Fall of 1989 has come and gone, of course, and I understand that EPA has still not published the revisions. Section 307 is very important to many of our coal operators, and I would very strongly urge you to expedite its implementation. I would also ask you to supply for the record an explanation of the delay and when you expect to publish the revisions.

Answer: Section 307 of the Water Quality Act of 1987 amended Section 301 of the Clean Water Act (CWA) adding Section 301(p), providing for modification of the best available technology economically achievable requirements of the CWA for pH, iron and manganese from certain preexisting discharges at coal remining operations.

EPA decided the best way to implement this provision of the statute was to modify its current effluent limitations guidelines regulations for the coal mining point source category to allow for the case-by-case judgement provided by the statute. It was also decided that it was most efficient to include this revision in a regulation package that was being developed to make other changes to the National Pollutant Discharge Elimination System (NPDES) regulations; a draft of this proposed regulation package includes provisions dealing with implementation of Section 301(p), along with other provisions of the 1987 amendments and other changes which will improve implementation of the NPDES program nationally.

The regulation was not proposed in the Fall of 1989 as was our intent when EPA responded to Congressman Rahall in July 1989. The delay has been, in part, due to the effort of EPA staff to resolve several controversial issues with regard to all provisions of the proposed regulation. The Office of Water has renewed its efforts to resolve all internal issues within the next one to two months, allowing for proposal in October 1990.

EPA recognizes the frustration that has arisen due to its failure to promulgate regulations to implement Section 301(p). For this reason, the State of West Virginia could implement these provisions on a case-by-case basis before promulgation of the regulation.

Congressman Mollohan

TRANSFER OF NPDES AUTHORITY

Question: West Virginia has been trying for some time now to gain EPA approval of its decision to transfer NPDES (National Pollutant Discharge Elimination System) authority from the West Virginia Department of Natural Resources to the West Virginia Department of Energy. Why hasn't EPA approved this transfer? When do you anticipate this transfer will be consummated?

Answer: EPA has been working with the State of West Virginia for several years regarding the State's request to transfer NPDES authority for coal and other mineral resource operations from the Department of Natural Resources (DNR) to the Department of Energy (DOE). EPA originally approved authorization of West Virginia as an NPDES authority in 1982.

In August 1989, Edwin Erickson, Region III Administrator, wrote to Governor Caperton indicating that two important issues must be resolved before EPA could approve the program transfer. The issues are (1) the need for a single Memorandum of Agreement (MOA) with EPA covering the three State agencies involved in the West Virginia NPDES program (DNR, DOE and the Water Resources Board) and (2) the need for enforcement against NPDES violators and the State's apparent lack of resources to enforce even the most serious violations.

While staff from EPA and the State have continued to work on various issues regarding the MOA between EPA and the State on the operation of the NPDES program, we have been unable to reach final agreement with the State on these issues. EPA has subsequently agreed to proceed with approval of the transfer with separate MOAs with each State Agency. In addition, EPA has been involved in numerous discussions with the State about severe budgetary and resource limitations currently facing the State which impact their effective implementation of the NPDES program. State staff have indicated that it may be necessary, if the West Virginia Legislature fails to provide adequate resources to implement the NPDES program by March 1991, for EPA to undertake program withdrawal action. Because of the unresolved nature of the enforcement issue raised by EPA to Governor Caperton in August 1989, EPA is unable to provide a date by which it projects approval of the transfer could be completed.

Congressman Mollohan

INTERPRETATION OF NPDES

Question: I have one other question about EPA's enforcement of the NPDES program as it applies to mining operations in West Virginia. For the past two to three years, Region III has administered the program in such a way that it essentially prohibits "in-stream" water treatments in mining operations. It is my understanding that Region III is the only region that has adopted this interpretation of NPDES, and that even within Region III, it is applied only in West Virginia and only in cases involving mining operations. This strikes me as grossly discriminatory, on several counts, and I would ask for an explanation of this selective interpretation.

Answer: The Clean Water Act prohibits the discharge of pollutants or dredged and fill materials from point sources into waters of the United States unless the discharge is authorized under either a section 402 or 404 permit, as appropriate. The issue raised by in-stream treatment in West Virginia coal mining permits, as well as other mining and other industrial permits throughout the nation, is whether and to what extent waters of the United States can be used for waste water treatment and disposal.

The answer to this question involves a variety of regulatory, policy and legal issues as well as, in the case of coal mining, regulation or potential regulation of various aspects of the operations by the State of West Virginia as the NPDES and Surface Mining Control and Reclamation Act (SMCRA) authority; the Army Corps of Engineers as the section 404 permit authority; and EPA as the Clean Water Act oversight authority. The various federal agencies have been working, and are continuing to work, to come to a common understanding and resolution of the problem.

In the interim, EPA Region III has developed a Regional policy which indicated how it was going to deal with the issue of in-stream treatment or disposal for coal mining operations in Region III in reviewing State NPDES permits. The policy states that the impoundment of waters of the United States for in-stream treatment of mining-related waste waters is prohibited, but articulates limited circumstances in which EPA will not object to State-issued permits. While in its implementation of the policy EPA has found it necessary to object to numerous NPDES permits proposed by West Virginia, through actions taken by the State, almost all of the objections are eventually resolved and the coal mining operations and related discharges are allowed to occur. The Region III policy was challenged by the industry in federal court. The Region's policy was upheld by the U.S. District Court for the Southern District of West Virginia in West Virginia Coal Association v. Reilly in December 1989. (The industry has appealed this decision to the U.S. Court of Appeals for the Fourth Circuit.)

Congressman Mollohan

NONPOINT SOURCE MANAGEMENT PROGRAM

Question: It is my understanding that West Virginia has been allocated only about $400,000 for its Nonpoint Source Management Program, under Section 319 of the Water Quality Act. This allocation equals about 1% of the $40 million appropriated nationally. While this may be a proportionate level of funding when measured against West Virginia's population, it seems somewhat small when one remembers the particularly difficult problems West Virginia's program faces. I would, consequently, very much appreciate an explanation of the process used to determine West Virginia's allocation.

Answer: West Virginia was allocated $396,000 as its planning target for fiscal year 1990 funding under Section 319 of the Water Quality Act. However, because of the particularly high quality of West Virginia's grant application, the actual grant award for this year was $593,000.

The formula used to allocate Section 319 funds is based on five factors:

- population density and growth
- an estimate of the extent of non-urban NPS problems
- wetland acreage
- wellhead protection areas
- a minimum funding level for each State

These factors were based upon interim criteria suggested by Congress. EPA intends to develop a revised formula for Section 319 funding for fiscal year 1991 and beyond.

Questions Submitted for the Record by Congressman Chapman

PESTICIDES

Question: Last year this subcommittee urged the Agency during this fiscal year to proceed with development of a granular policy to determine the ecological risk presented by the application of granular pesticides. What progress has been made in the development of this policy?

Answer: EPA is preparing a document, scheduled for distribution next month, explaining in detail the Agency's methodology for assessing avian risk from granular formulation pesticides, including calculation of the number of lethal doses per square foot, with confirmatory field studies and monitoring data. The document further lists those compounds determined by the Agency to be of concern due to the risk they pose to avian species. The avian-granular document is a statement of relative risk; no regulatory options are presented.

Question: Have other federal agencies which would have insight into this issue been consulted during this process?

Answer: Yes. EPA avian risk assessment methodology has been peer reviewed by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Science Advisory Panel (SAP). The SAP supported EPA's methodology and suggested minor changes that have been incorporated in the forthcoming avian-granular document.

The U.S. Department of Agriculture has also been provided with the opportunity to comment on EPA's risk assessment methodology as presented in the carbofuran Technical Support Document. EPA will respond to those comments in the carbofuran Notice of Final Determination.

Question: Has the Agency gone beyond the comparative hazard assessment it conducted on alternative granular pesticides as part of its ongoing review of carbofuran, and in fact considered what factors in the use and application of this class of products (i.e. granular pesticides) actually place birds at a significantly greater level of risk than other normally occurring conditions found in their environment?

Answer: The comparative hazard assessment (LD50/square foot) conducted as part of the Special Review of granular carbofuran already takes into account many factors in the use and application of granular pesticides. These factors include the rate of usage of a chemical (pounds applied per unit area), the percentage of active ingredient contained in the granule, and the method of application of the pesticide (i.e. in-furrow v. banding v. broadcast).

Other factors that may impact bird risk and mortality include the size, shape and color of the granules themselves. In an effort to reduce bird mortality associated with the use of granular carbofuran, FMC Corporation performed some limited testing on the effect of a change in the formulation of the carbofuran granules. They studied the effects of different types of carriers (silica sand, corn cob and compacted granules), and varied the shape and color of the granules. The Agency reviewed the study and concluded that due to some problems in its execution, the study did not show definitive differences in mortality due to changes in formulation.

The Agency is aware of the possibility that certain bird behavior could have effects on the risk of granular pesticides. However, there are so little data available on the behaviors themselves that it is impossible to quantify any effects.

Finally, the Agency acknowledges that the natural surroundings of any habitat presents some baseline level of mortality. However, these "natural" risks are an integral part of the balancing of ecosystems, where the introduction of foreign material (i.e. granular pesticides) provides an added level of risk above the baseline mortality.

Congressman Chapman

DRINKING WATER

Question: Last year, I asked a question about the impact EPA safe drinking water requirements have on small communities. While supportive of efforts to reduce the levels of contaminants in the water supply, I am concerned that there be some relief for the economic burden placed on small rural water systems. Among other efforts, EPA indicated they are working with private industry, utilities and states in developing innovative low cost technologies for small systems. Could you please provide us an update on the progress made on this initiative?

Answer: The EPA Office of Drinking Water has organized the Low Cost Small System Innovative Technology Initiative, consisting of water equipment manufacturers and distributors, small water system managers and owners, state health officials, national associations, and EPA professionals. This initiative has five working committees, as described below:

Technology Development: This committee is identifying small systems with compliance problems and will select industry participants who will donate equipment to the water system to demonstrate the efficacy of low cost technologies. Eight sites have been selected, with a total of ten expected to be identified by the end of the year. The committee will distribute requests for technical proposals from manufacturers or distributors for the first four sites within the next two months. The second four sites should follow shortly thereafter. We expect these first eight demonstration projects to be underway (at no cost to the Federal government) by the end of the calendar year.

In-place Technology Study: The Association of State Drinking Water Administrators (ASDWA) has agreed to administer a study of low cost technologies now in place and in use. The equipment manufacturers are donating to a fund controlled by ASDWA and will open their files, thus allowing documentation of the efficacy and economic efficiency of these small system technologies. This effort, organized by EPA's Office of Drinking Water, is an example of the public-private partnership which is entirely supported by the private sector but administered by the State association through EPA instigation.

State Review Processes: States have been slow to accept the use of low cost technologies, as their plan review processes are not well suited to innovative technologies. EPA has awarded ASDWA a grant to examine the plan review processes commonly used by states and make recommendations to streamline those reviews in a manner which will open the market to lower cost technologies. This study was funded in late April and is slated for completion within 120 days.

Financial Assistance: This committee has evaluated a series of alternatives to ease the financial challenge facing small water systems. These alternatives include leasing agreements, operations and maintenance service agreements, and both fiscal and engineering regionalization. The committee, working with the technology development committee, is selecting case studies and demonstration projects.

Small Water Systems Clearinghouse: In addition to other activities, there is a need for a technical network through which small systems can access assistance and receive some direct problem solving assistance as well. A repository of technical information on small systems must be available to the states and private engineers to facilitate implementation of low cost technologies. Further, the manufacturers and equipment distributors need a reliable and well established home for technical and, to some degree confidential, business information on their products. The best repository for this information and the best coordinator for the water supply community is the American Water Works Association (AWWA). AWWA is leading an effort to define alternatives to organize and fund a full service small water systems technical center and clearinghouse. AWWA will network with existing assistance programs serve as the national center responsible for identifying small water system needs and organizing solutions. The initial feasibility study is expected to be completed by the committee by early fall of this year.

Congressman Chapman

DRINKING WATER

Question: I feel strongly that the resources provided to the National Rural Water Association and the Rural Community Assistance Programs used to support technical assistance and training for small rural water systems are crucial in our efforts to assist these water systems to comply with Safe Drinking Water Act requirements. Last year, Congress had to increase funding for this purpose by $3.5 million. Once again in FY 1991, you have requested only $1 million for this purpose, a decrease of $3,374,100 over the FY 1990 allocation. How can you justify this decrease in funding?

Answer: The requested funding will help support the Rural Water Association (RWA) and the Rural Community Assistance Projects (RCAPs), which are also funded in part by member dues and fees for training and other services. EPA's longstanding premise is that this assistance acts as a lever for more effective commitment from these grass roots organizations, not as a substitute for self-sufficiency.

The Agency believes efforts to promote voluntary compliance and self-policing among water systems and efforts to give systems the knowledge and skills to help themselves are well worthwhile and cost-effective. The RWA and RCAPs are two important tools to this end but not the only tools. EPA is promoting the mobilization of other parties as well, including the American Water Works Association, the National Council of State Legislatures, The National Manufactured Housing Association, various educational-support associations and the Association of State Drinking Water Administrators. This mobilization strategy should focus a greater effort to the problem of small public water supplies.

Congressman Chapman

DRINKING WATER

Question: I have a concern about the cost that school districts are being asked to pay for correcting lead in drinking water from water coolers in the schools. I understand that under the Lead Contamination Control Act (LCCA) of 1988, the Consumer Product Safety Commission must issue an order requiring manufacturers and importers at their expense to repair, replace, or recall and provide refund for water coolers having lead-lined tanks as identified by EPA. However, manufacturers are not required to conduct monitoring or pay for other expenses. These expenses incurred by schools for testing and remedial action were to be reimbursed by State grant money supplied by the Federal government.

Has EPA ever requested Federal funds for this purpose? If so, how much and what is the current funding situation in regard to this? If not, how much funding would be needed to cover the school's costs in this regard? Under which program in EPA would funding for this purpose be appropriate?

Answer: EPA has never requested Federal state grant funds to reimburse schools for testing and remedial action expenses. The Administration does not consider this activity to be an appropriate Federal role. EPA believes it is preferable to provide the states with funds for implementing a technical assistance program. This has been done with increased state funding provided through the Public Water System Supervision grants. In addition, EPA has developed and disseminated a guidance document and information brochures and provided training to school personnel in a number of states. EPA is now completing a videotape for school officials on how to identify and deal with lead in their drinking water.

There are approximately 880,000 water coolers in public and private schools and 31,000 in daycare centers. The best available data indicates that initial testing of each school cooler outlet would require about $30 million, with followup testing required for some cooler outlets. In addition, the costs of other repairs, such as replacing lead piping, might be required, but we have no way of estimating this cost.

Congressman Chapman

REID VAPOR PRESSURE REGULATIONS

Question: Concern has been expressed to the EPA by petroleum marketers in the State of Texas regarding the Phase I standards for Reid Vapor Pressure of gasoline. In the summer of 1989, marketers complained of supply disruptions and shortages in Texas due to the fact that the area west of the 99th longitudinal parallel (9.0 standard) contains few sources of product supply as opposed to the eastern half of the state (9.5 psi standard). The prospect for renewed disruptions and shortages in the summer of 1990 is a concern for both consumers and marketers in Texas.

Will the Agency consider imposing a 9.0 psi standard on the entire State of Texas during the summer months, and in particular, is such a standard expected to be set before the onset of the summer of 1990?

Answer: During the summer of 1989, EPA worked closely with the Texas Oil Marketers Association (TOMA) on the issues surrounding the split of Texas at the 99th longitude. Despite the efforts of TOMA, EPA and other interested parties, no concensus could be reached on changes to the program in 1989 to alleviate potential supply concerns. As a result, we have received reports from TOMA and individual marketers that supply disruptions occurred. In particular, it was necessary for marketers/distributors in West Texas to travel further distances to get complying fuel. However, we are not aware of any fuel shortages or outages occurring in 1989.

In a letter dated January 26, 1990, TOMA reiterated its concerns about potential supply problems associated with the split of Texas at the 99th longitude, especially considering the Texas Air Control Board's decision to require the more stringent standard (9.0 standard) in the Dallas/Ft. Worth area of East Texas. In its letter, TOMA recommended a statewide 9.0 standard. EPA is working with the State of Texas and the regulated parties, including TOMA, to reach resolution of this issue as quickly as possible. However, the requested change involved adoption of a more stringent federal standard in East Texas and, therefore, involves a notice and comment rulemaking which will take some time to complete. A notice of proposed rulemaking proposing to adopt the change is nearing completion, but final action cannot occur until an opportunity for public review and comment is provided. Therefore, final action could not occur before mid-summer.

Congressman Chapman

REID VAPOR PRESSURE REGULATIONS

Question: Is the EPA considering imposing a nationwide RVP standard of 9.0 psi during the summer months?

Answer: EPA published a proposed rulemaking for the nationwide gasoline volatility program in August 1987. A two-phased program was proposed with phase I taking effect in the summer of 1989 and a second, more stringent phase II beginning in the summer of 1992. In March 1989, EPA promulgated the phase I standards which included a 9.0 psi standard for some states in some months. For phase II, EPA proposed a 9.0 psi standard for most of the nation, but lower standards (7.8 and 7.0 psi) were proposed for some states. EPA is currently in the final stages of development of the phase II final rulemaking.

Congressman Chapman

UNDERGROUND INJECTION CONTROL

Question: The EPA's request for Underground Injection Control Program Grants is $10,500,000, a decrease of $677,000 from FY 1990. The EPA budget notes that this decrease reflects no further need to federally support demonstration projects for control of Class V injection practices. Please explain the Agency's rationale for reducing funding for Class V projects.

Answer: In FY 1990, the Agency requested funds for one-time demonstration projects to implement its Shallow Injection Well strategy. This strategy calls for the testing of innovative approaches for managing Shallow Injection Wells that would be broadly applicable by transferring experiences to other state and local governments. Further, the strategy will generate data and information on high risk subcategories of wells. Notice to this effect was published in the Federal Register on March 8, 1990. These funds are provided in addition to the base state grant funding level of $547,000 on Class V activities which focus on inventories and assessments of the subcategories of wells.

In FY 1991, the Agency plans to evaluate the demonstration projects to determine cost effective options for States to control Class V wells. The data may be used to support regulations for high priority Class V wells. The full costs of administering an effective Class V program at the state level are being estimated over the next several months by the Underground Injection Practices Council, the organization of state underground injection control administrators.

Congressman Chapman

UNDERGROUND INJECTION CONTROL

Question: Concern has been expressed by Members representing communities in Region VI that the EPA review process for deep injection well petitions has not ensured review of petitions before applicable ban dates under the Hazardous and Solid Waste Amendments of 1984. While I appreciate the Agency's recent issuance of seven preliminary approval notices for Region VI and the EPA's recommendation for a six-month capacity extension be granted to injection facilities facing the May 8, 1990 ban date, I remain unsure that EPA is committing the resources needed to permanently eliminate the backlog of petitions. The EPA request under Hazardous Wastes (Regulations, Guidelines and Policies--Water) reflects a decrease in Salaries and Expenses and for Abatement, Control and Compliance from FY 1990. Do you feel that the amounts requested for FY 1991 will be sufficient to ensure timely processing of deep well injection petitions in the future?

Answer: Although the EPA budget request for FY 1991 under Hazardous Wastes (Regulations, Guidelines and Policies--Water) reflects a decrease in Salaries and Expenses and Abatement, Control and Compliance appropriations from FY 1990, the amounts requested in FY 1991 should be sufficient to ensure timely processing of future deep well injection petitions for several reasons.

First, the majority of the 67 submitted petitions have already undergone preliminary review. Although additional technical review still needs to be completed, funding has been provided for this work.

Second, the Regions are striving to complete the review process and issue a final Agency determination for most of the current submittals in FY 1990. Many of the petitions are for facilities that will be affected by the August 8, 1990, prohibition date for California list wastes and commercial operators injecting Third Third wastes. These petitions have already received extensive review, and either have received or have been scheduled for public notice and public hearings.

Finally, since the majority of submitted petitions will be acted upon by the end of FY 1990 and a relatively small number of new petitions received, the Regions should be able to expeditiously complete processing with the requested level of funding. New petitions for hazardous waste injection wells will result from recent promulgation of the Toxicity Characteristics Revision Rule (March 29, 1990) and removal of the Bevill Mining Waste Exclusion for certain facilities. The Agency is currently identifying those injection facilities that will be affected by these rules, but large numbers of new migration petitions are not anticipated at this time.

Congressman Chapman

PETROMARK

Question: I applaud the EPA's decision to extend for one year the financial responsibility compliance dates for Category 3 and Category 4 underground storage tanks. Recently, however, a key provider of pollution liability insurance, Petromark, has entered into an agreed order of supervision with the Tennessee Insurance Department. This circumstance could seriously limit the ability of a majority of Category 2 tank owners to obtain insurance at rates that would allow them to stay in business. Many industry associations are recommending that the compliance date for Category 2 tanks be extended to April 26, 1991, in order for more state tank trust funds to become operational and to minimize competitive distortions that may otherwise occur. In light of Petromark's financial uncertainty, is the EPA considering extending the compliance dates for owners of 100-999 underground storage tanks?

Answer: Owners with 100 to 999 underground storage tanks should have complied with the Federal financial responsibility requirements by October 26, 1989. There are currently no plans to extend the compliance date for this group, and EPA will continue to enforce against those who have not already complied.

EPA is aware that Petromark has ceased its operations. It is uncertain how many of Petromark's clients will be able to obtain coverage from other providers. We are currently monitoring the situation. It is not EPA's intention to have, as a primary enforcement target, those owners and operators who are making good faith efforts to bring their sites into compliance.

Congressman Chapman

RCRA REGULATION: WOOD PRESERVERS

Question: The wood preserving industry is currently the subject of a proposed rule that is to be issued by your Agency later this year. This proposal would regulate under the Resource Conservation and Recovery Act (RCRA) several wastes and residuals generated by the industry. I understand that you have received many comments on this rule from Capitol Hill. The majority of these comments advocate a multi-statute approach for the regulation of this industry. Under this framework, stormwater and wastewater discharges would be regulated under the Clean Water Act; discarded process residuals would be controlled using RCRA, and pesticide drippage (excess pesticide that is contained and collected for reapplication) would be regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Are you considering these comments as you promulgate the final rule and select a regulatory approach for this rulemaking?

Answer: Comments provided by Congress and others are being given serious consideration in the course of our deliberations.

Question: Aside from the multi-statute approach to the regulation of the wood preserving industry what are your other regulatory options? Please elaborate as to why you are considering each option.

Answer: The Agency is continuing to consider the comments received on the proposed rule and is in the process of selecting a regulatory approach for this rulemaking. EPA intends to promulgate a final decision in November 1990. Until that time, EPA is unable to elaborate upon its deliberations.

Question: Can you elaborate on the type of consideration you are giving to the multi-statute approach to the regulation of the industry?

Answer: The Agency is continuing to consider the comments received on the proposed rule and is in the process of selecting a regulatory approach for this rulemaking. EPA intends to promulgate a final decision in November 1990. Until that time, EPA is unable to elaborate upon its deliberations.

Congressman Chapman

Question: If EPA were to promulgate a rule that instituted a multi-statute approach for the wood preserving industry, how would you envision this regulatory scheme working?

Answer: Agency practice regarding ongoing rulemakings prevents us from commenting on the nature and substance of our deliberations.

Congressman Chapman

EPA IMPACT ON SMALL COMMUNITIES

Question: Last year, I asked EPA several questions about the economic impact EPA requirements have on small communities. I am very concerned about this issue! In your response, EPA demonstrated that they have a keen awareness that the regulations do have an impact on these communities and that you do consider this factor in regulation making. However, you noted that the procedure is limited because it does not take into account other pending federal regulations actions (either from EPA regulations or any other agency).

There are nearly 40,000 general purpose governments in the United States and most of them are very small. 77% have populations under 5,000 and 48% have populations under 1,000. Resources in most local governments are severely limited, in fact the cumulative average revenues for almost half of all governments are only $127,000 per year. This includes revenues for Federal and State Governments, local taxes, car washes, bake sales, etc. This revenue is used to fund ALL government services -- police, fire, salaries, insurance, infrastructure, etc.

These are statistics I am quoting from your agency.

I understand that in December you initiated a Small Communities Coordinator (SCC) in the agency -- the first of any agency. I think this is a great idea and it is important that you recognize this need.

However, it is also important that this new initiative have the resources needed to achieve the mission of this program.

For example, I understand there is no comprehensive, cross-media list of environmental regulations for small governments. Without such a list, there is no way EPA can know what is required of small communities or what economic burden is being placed on these communities to comply. This should be information that a Small Communities Coordinator could find and use to help develop an understanding of the problems to be addressed.

While your first step in creating a Small Communities Coordinator is a positive one, again, I believe this initiative needs to be backed up so it can accomplish its goals.

What staff resources does the Small Communities Coordinator have?

Answer: Two FTEs are budgeted for the Small Communities Coordinator at the present time.

Question: Are there any budgeted funds for this initiative?

Answer: The Office of Regional Operations, State & Local Relations in which the SCC is located, was in transition when the Small Communities Coordinator function was initiated, so SCC funding was included in the overall Office budget but no program or project-specific funding was identified.

Question: Do you have plans to increase staff or resources?

Answer: We are currently reviewing this area to assess what the future resource needs will be.

Question: Does the Small Communities Coordinator have any contract authority or any means to conduct studies?

Answer: No, not at this time.

Question: What kind of funding would be needed to make this initiative a greater priority and to allow needed studies and coordination to take place?

Answer: This initiative is intended to make small community concerns a greater priority in Agency activities without additional resources by providing an in-house advocate for small community concerns.

Question: I have one more final concern about the ability of small communities to comply with regulations. Basically, we are never going to achieve necessary clean up or meet safety requirements if small communities can not meet requirements. Already we are seeing massive non-compliance. I believe we need to find a realistic way to improve this situation.

Last year, when I asked to what extent EPA incorporates the information from economic impact studies into the activities and programs of the agency, the response listed ways EPA assists local governments in meeting requirements. Some examples cited included, modifying regulations to lessen the severity of costs, allowing the use of alternative treatments instead of those prescribed, allowing for variances or exemptions, providing education and outreach, and working with private industry, utilities, and states to develop new low cost technologies.

While all of these allowances are helpful, I do not believe it is a realistic approach to addressing the financial needs of these communities to comply. You can provide all the exemptions, extensions, and new technologies you want, but if these communities do not understand what financial resources are available to help them to comply, then the massive non-compliance we are seeing today will not get any better.

Most small communities do not have access to the bond market and thus usually rely on local banks. Many do not have the resources to even explore other financing options. Has EPA identified current means for financing or facilitating financing for small communities to meet compliance requirements?

Answer: Most small community data which the agency uses is based upon municipal governments with sewage systems and bonding authority; therefore the full range of the small community universe is not represented. For example, wastewater treatment, solid waste, and drinking water facilities may be owned by local governments, rural cooperatives, conservation districts, economic development districts, private industry, public-private partnerships, or a combination.

Each ownership arrangement has its own financing implications, and financing alternatives may thus be both program-specific and owner-specific. Cross-media information is difficult to assemble since even the definition of "small" varies from program to program, and comprehensive financing alternatives are even more difficult to define.

The Agency has approached financing for small communities on a program-specific basis, and there are a number of activities under way which seek to explore financing alternatives. A few examples include:

-- The Small Communities Financing Strategies Workgroup established by the Environmental Financial Advisory Board (EFAB), under the National Advisory Council on Environmental Technology Transfer (NACETT), which will be recommending financing strategies to improve the ability of small communities to provide environmental services and infrastructure;

-- the Public-Private Partnership (3P) initiative, which is funding demonstration projects in ten states to show communities innovative ways to pay for environmental services;

-- the Office of Water is in the final stages of a study to determine the abilities of small municipalities to finance wastewater treatment needs which, in turn, will provide direction for financial planning for small municipal governments.

This is not a comprehensive list, but it is representative of a good number of other initiatives in EPA which are designed to address governmental financing options. We are also looking at how we can coordinate better within the Agency to exchange information on financing for small communities.

Question: I believe that assisting small communities in financing could be the only way we are going to be able to get these areas to comply. I would like to see funding to examine this problem and develop financing options for small communities.

Hopefully, results from such a study will not only directly assist small communities, but it could provide information EPA can incorporate into environmental policy and rulemaking. Do you have any comments on such an initiative?

Answer: A study of financing options would be extremely valuable since as we have discussed, only limited information on small communities is currently available. Of special concern are the many small communities without bonding authority and/or sewer systems. Further studies of these governments in particular is vital, since available data -- the Municipal Sector Study and State Needs Studies , for example -- do not reflect these entities, and thus we are missing a sizeable segment of the "small" universe.

It would also be helpful to generate information on the extent to which taxing or other fund-raising capacity is available to small governments but is not being used to finance their environmental and other infrastructure needs.

Congressman Chapman

RADIATION PROGRAMS

Question: I am interested in the Radon State Grant Program. Last year was the first year EPA issued Radon grants to States to assist them with assessing and mitigating radon. Could you tell us how the program is working?

Answer: The Agency has allocated FY 1990 grant funds to its Regional Offices to assist states in the development and implementation of programs to assess and mitigate radon. Regional offices are responsible for determining the amount of Federal funding awarded to a state, and will give priority to activities or projects based on the criteria established by the Indoor Radon Abatement Act (i.e., seriousness/extent of radon problem, potential to reduce radon levels, innovative measurement, mitigation or management potential, and potential to establish core programs in all states that wish to participate). EPA expects that most grants will have been awarded by June 1990 to the states and territories that applied (48 States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands). 24 grants were awarded by May 1. The Agency is in the process of evaluating the State Indoor Radon Grant (SIRG) program against the four program goals:

- achieve widespread participation in the program among the states and territories;
- establish basic, core capabilities for radon response in states that have not yet developed radon programs, and to stimulate innovation and expansion in states that have initiated programs;
- foster radon program development within the states that appropriately reflect the differences in the scope and severity of radon problems across the states; and
- strengthen the Federal/State partnership by helping states develop programs that will continue to effectively communicate and reduce radon risk beyond the 3 year life of the SIRG Program.

The Agency will publish an interim report, evaluating the program's progress against these goals, by December, 1990.

Congressman Chapman

RADIATION PROGRAMS

Question: I understand the request for this initiative is $9 million for FY 91, an increase of $27,900 from 1990. Also in FY 91 the states must provide a 40% match to Federal funding. Was any state match required for these funds in FY 1990? By requiring a 40% state match, how much more of the radon problem do you believe can be addressed?

Answer: States were required to provide a 25% match for their first grant year in FY 1990. 48 states, Washington, D.C., Puerto Rico and two territories applied. In FY 1991, states applying for their second year of Federal grant assistance must provide a 40% match, thus increasing state investment in radon programs and augmenting the impact of Federal grant dollars. The Agency is escalating matching fund requirements to accelerate the development of self-sufficient state programs through cooperative Federal and state investment. Local radon problems can be addressed more effectively by states than by the federal government.

Questions Submitted for the Record by Congressman Atkins

WASTEWATER TREATMENT RESEARCH

Question: What is EPA doing to research and develop new wastewater treatment technologies that may enable us to cut some of the staggering treatment costs we're facing and at the same time treat our wastewater more efficiently?

Answer: The Agency has helped demonstrate and evaluate several cost effective new wastewater treatment technologies. For example, in small communities where the cost per capita of collection and treatment is highest, EPA has been the leader in demonstration and technology transfer for sewer technologies which, on the average, reduce the total wastewater management costs by 20 to 40%. The Agency has also assessed and evaluated new small- to medium-sized community wastewater treatment systems such as counter-current aeration, trickling filter/solids contact and sequencing batch reactors, all of which can potentially save a significant percentage of capital and operation and maintenance (O/M) costs. Similarly, sludge handling processes such as composting, an improved dewatering alternative and a high efficiency aerobic digestion system have been assessed which could save capital and O/M costs. For large urban centers, EPA has recently produced a significant assessment of high efficiency aerators which may result in savings in O/M costs for larger cities.

Congressman Atkins

WASTEWATER TREATMENT RESEARCH

Question: It is my understanding that funding for wastewater engineering research conducted at EPA's Risk Reduction Engineering Laboratory in Cincinnati has steadily decreased from a high of $19 million in FY 1979 to $4.3 million in FY 1990. Your request for FY 1991 is up a tiny bit to $4.6 million. Given the fact that you are phasing out financial assistance, shouldn't you be making more of an effort in wastewater treatment R&D?

Answer: The funding for wastewater engineering research conducted at EPA's Risk Reduction Engineering Laboratory in Cincinnati has decreased in FY 1990 due to the completion of a substantial number of wastewater engineering research programs which were initiated in the late 1970s and early 1980s. The Agency programs have shifted toward higher research priority areas such as hazardous wastes and Superfund. In planning the FY 1991 wastewater engineering research, the Agency has taken into account that the construction grant program is phasing out, and the need of wastewater treatment technology, especially by small communities, is increasing. Our request for FY 1991 at $4.6 million reflects our research shifting its focus more and more toward the small community needs in wastewater engineering.

Congressman Atkins

WASTEWATER TREATMENT RESEARCH

Question: I have also heard from a number of engineers that those new technologies that are being developed aren't being tried out because of inflexible EPA regulations and strict cleanup timetables that make experimentation with new technologies too risky because of the threat of fines. Is that true, and if so, do you believe that the Clean Water Act should be amended to foster the development of new and innovative treatment technologies?

Answer: EPA regulations developed in response to the Innovative and Alternative Technology Program, included in the 1977 Amendments to the Clean Water Act, allowed considerable flexibility in the use of new technologies. A GAO report published in 1984 indicated that there was still reluctance among design engineers and communities to try new technologies and pointed out reasons such as potential performance problems, risk of costly and embarrassing failures (even with a guarantee for modification or replacement), and conservative state design standards. These factors still exist. Strict cleanup timetables may be a factor in some cases. Other reasons communities are not utilizing new technologies include procurement procedures which do not allow for single source procurement and differences in review and approval from state to state which force developers of technology to make frequent changes. We see no need to amend the Clean Water Act to respond to this concern.

Congressman Atkins

WASTEWATER TREATMENT RESEARCH

Question: I understand that a number of new wastewater treatment technologies are being developed overseas. Norway and Sweden, in particular, have taken the lead in cutting-edge chemical treatment processes that were pioneered in this country, and they're selling those technologies to other European countries. I consider it to be ridiculous that technologies that we pioneered are now being sold for profit by other countries because we haven't taken the necessary steps to develop them. What, in your view, is the best way that we could go about correcting that situation?

Answer: Some technologies do fit the scenario presented, i.e., early development work in the U.S. with little follow-up, except by foreign interests. Two examples are autothermal thermophilic aerobic digestion (ATAD) of sludge (perfected in Germany) and biological nutrient removal (BNR) (South Africa). The chemical treatment technology as practiced in Norway and Sweden does not meet the U.S. regulatory requirements for secondary treatment. The reasons for the perceived scenario generally can be traced to two factors: 1) U.S. policy regarding treatment requirements and 2) decisions of U.S. equipment suppliers to eliminate their R&D programs. Regarding the second factor, equipment manufacturers have indicated that an equal investment in advertising will yield twice as much return as one in R&D, and it is cheaper to buy licenses for salable foreign technologies than to develop them internally.

ATAD was perfected in Germany where the regulations regarding pathogen reduction provided an incentive for such a process at the critical time in its development. Little attention was paid to pathogens in sludge in the U.S. at that time and even at this time the high degree of pathogen destruction possible with ATAD is only required in some cases.

BNR was not developed in the U.S. because there was widespread doubt of its effectiveness in the 1960s when U.S. policy removal necessitated a dependable method for phosphorus removal. Chemicals were adopted and placed into widespread use. Generally foreign countries had more time to consider alternatives to chemical removal and developed biological methods for both phosphorus and nitrogen control.

Congressman Atkins

WATER CONSERVATION

Question: I'd like to compliment you and thank you for starting up some good work on water conservation over the past year. As I understand it, your Task Force on Water Conservation has initiated a number of minor projects that I would hope could lead to bigger and better things. Could you please detail for me the work that EPA is currently performing to promote and support water conservation, and what is planned in that area for FY 91?

Answer: Current activities underway include: the development of wastewater reuse guidelines for States; the study of water conservation impacts on municipal budgets and treatment facilities; the development of interactive educational software on home water conservation practices; the development of software for municipalities to evaluate the cost effectiveness of various water conservation programs; support of a National Academy of Sciences study on the marketing of western water rights; the development of suggested strategies for communities to use in implementing water conservation programs; development of a technical reference document for Regional personnel on alternatives to conventional water supply projects; and preparation of several presentations and exhibits for the Conserv '90 conference in Phoenix.

Future activities proposed in the FY '91 President's Budget include: the development and printing of educational materials on efficient water use; the study of water conservation as a response to global climate change; the stimulation of efficient municipal water use through special conditions for the reissuance of permits and awarding of grants; clarification of the eligibility of State Revolving Loan Funds for financing water conservation activities; participation with the U.S. Army Corps of Engineers in a study of the response of Federal agencies to emergency drought situations; possible funding of research in water use efficiency-related topics; and the development of case studies in the reclamation and reuse of wastewater.

Congressman Atkins

WATER CONSERVATION

Question: I believe that water conservation offers an opportunity to address a broad range of environmental and economic problems, including water shortages, rising water and sewer bills, wastewater treatment construction, water quality, and wetlands protection. As a result, I believe that EPA should be doing a lot more to promote water conservation. Do you believe that EPA should be devoting greater resources to water conservation?

Answer: Over the last year, EPA has already significantly increased the amount of staff time and dollars committed to addressing water conservation issues. We are in the process of increasing the level of water conservation expertise and technical assistance capability in our Regional Offices, as evidenced by the national workshop we sponsored in Tucson earlier this year, the technical reference document we are developing as a product of that workshop, and the development of a water conservation "expert" position in Region 5. We are also attempting to increase the capacity of individuals, utility managers, State officials and other decision-makers to respond to the need for water conservation by providing appropriate information and analytical tools. This includes interactive tutorial software as well as analytical software which evaluates water conservation programs for a specific community. As the EPA water conservation program develops further, decisions will be made as to whether additional Agency resources need to be dedicated to this effort.

Congressman Atkins

WATER CONSERVATION

Question: Do you believe that it would make sense to set up a separate office within EPA to deal with water conservation, rather than to have a task force consisting of a number of people from different divisions who have other responsibilities as well?

Answer: We are in the process of formulating goals and a course of action for the Agency's water conservation effort. Until we define policy and program directions in greater detail, we cannot address the issue of what would be the best organizational or managerial structure for EPA to accomplish the goals which are established. We prefer, in any case, that this not be specified in legislation, so that the Agency may have flexibility in implementing the program in the most efficient and effective manner possible. One of the disadvantages of consolidating water conservation functions in one office is that such an office would not have the authority or ability to successfully implement water conservation principles across the full spectrum of Agency programs which influence water use practices.

Congressman Atkins

INTERNATIONAL ACTIVITIES

Question: The President's request for EPA's Office of International Activities is down $710,000 from $5.5 million to $4.8 million. Given the tremendous need for environmental assistance in Eastern Europe and the fact that the political situation now allows us to offer such assistance, how can you justify a decrease in EPA's international activities?

Answer: The decrease of $710,000 reflects one-time start-up costs related to the setting up and expansion of the Office of International Activities as well as an FY 1990 Congressional Add-on for Global Climate Change policy studies. The Office of International Activity's resources for environmental assistance in Eastern Europe are currently funded, not through the EPA appropriations process, but through the Foreign Assistance Act, more specifically the Support for East European Democracy (SEED) Act (P.L. 101-179).

Congressman Atkins

INTERNATIONAL ACTIVITIES

Question: Could you provide me with some details on the recommendations of the International Environmental Technology Transfer Advisory Board and what the Office of International Activities will be doing in FY 91 to implement those recommendations?

Answer: The International Environmental Technology Transfer Advisory Board (IETTAB) was appointed to identify and make recommendations to overcome the legal, institutional, and economic barriers to the transfer of environmental technologies to developing countries and Eastern Europe. The interim report, scheduled to be issued in late May, will outline the general principles in addressing these issues. The final report, expected to be issued in December, will contain explicit recommendations which will be presented to Administrator Reilly.

The Office of International Activities (OIA) does not currently have workplans for implementation as the recommendations are still in their formative stage.

Congressman Atkins

INTERNATIONAL ACTIVITIES

Question: The EPA-cabinet level bill passed by the House a few weeks ago would establish an International Office of Environmental Affairs. The President has threatened to veto the bill, and he supported an amendment that would have stripped all extemporaneous language other than mere elevation language, including provisions to create the international office. Does the Administration, and do you, oppose those particular provisions?

Answer: The Administration does not support H.R. 3847 because of specific provisions, including an International Office of Environmental Affairs, which constrain the President's authority to appoint Department officials and to organize Department offices and functions as he deems appropriate. The Administration supports the international environmental objectives embodied in the legislation but believes the Administration should have the discretion to determine the most effective structure to carry out such authorities.

Congressman Atkins

UNDERGROUND STORAGE TANKS

Question: Last month, EPA announced a one-year extension of the financial responsibility compliance date for two groups of petroleum underground storage tank owners and operators. The extension would apply to marketers owning between 13 and 99 such tanks, who will have until April 26, 1991 to comply; and marketers owning between one and 12 tanks who will have until October 26, 1991. Do you think the extra year will solve the problem, or will we be hearing the same complaints a year from now that insurance is impossible to get, and that these owners still won't be able to meet the deadline?

Answer: The Agency is hopeful that this one year extension will provide adequate time for tank owners and operators to obtain the required methods of financial assurance.

Question: How many states have now enacted legislation creating state assurance funds, and how many have received EPA approval?

Answer: To date, there are thirty-six states with enacted legislation creating state assurance funds. Nine state funds have received EPA approval: Alabama, Georgia, Iowa, Illinois, Louisiana, Montana, North Carolina, Vermont, and Mississippi.

Question: I heard a number of complaints about last October's financial responsibility compliance for petroleum marketers owning between 100 and 999 UST's. With so few States having received EPA approval for their assurance plans, how have these larger marketers fared in complying with your regulations?

Answer: While EPA has approved nine of the twenty-six funds submitted thus far, funds under review are treated by our regulation as tentatively approved. Consequently, marketers in these states are provided coverage by their state fund. Eight states have funds that have not been submitted that will provide at least partial coverage. Large marketers or those with a net worth of over 20 million also have the option of insurance, self-insurance, guarantees and surety bonds to meet the requirements. For States without state funds, EPA is in the process of collecting compliance data.

Congressman Atkins

Question: What has EPA been doing in terms of enforcing the compliance deadlines for marketers owning between 100 and 999 UST's?

Answer: EPA's primary objective in enforcing the financial responsibility requirements is to bring owners and operators into compliance with the regulations. EPA expects all owners and operators to make good faith efforts to achieve compliance with the regulations, and believes that enforcement actions must be taken against recalcitrant owners and operators. It is not EPA's intention to have as a primary enforcement target those owners and operators who are making good faith efforts to bring their sites into compliance.

EPA believes the first two groups of owners and operators, those who have over 100 tanks or a net worth of 20 million, should not have significant problems complying with the financial responsibility requirements. Most members of the first group can self-insure, and for the second group insurance or other mechanisms appear to be available.

EPA has initiated an effort to assess and maximize compliance by groups one and two with the financial responsibility requirements. EPA is working with a sample of states, primarily those states that do not have state funds, to assess compliance rates for the first two compliance groups. EPA is supporting states by supplying model compliance information request letters, computer assistance to modify state data bases, and/or enforcement follow-up for referred cases.

Initial requests for information have gone to owners and operators in Massachusetts, New Jersey, Delaware, West Virginia, Iowa, Nebraska, Kansas and Missouri. EPA expects letters to go out in Indiana and New York shortly.

Results in Region VII (Kansas, Nebraska, Missouri, Iowa), a Region where all the states have funds with at least partial coverage show about 90% compliance. Initial replies in other states indicate a majority of owners and operators in compliance. States are now initiating follow-up with non-respondents.

Questions Submitted for the Record by Congressman Watkins

ADA GROUNDWATER

Question: Could you provide the actual R&D dollar amounts allocated to the Robert S. Kerr Environmental Research Laboratory in Ada, Oklahoma for groundwater research for the past five fiscal years?

Answer: The R&D resources allocated to the Robert S. Kerr Environmental Research Laboratory (RSKERL) in Ada, Oklahoma for FY 1986-90 are as follows:

FY 1986	$6,531,300
FY 1987	$5,679,000
FY 1988	$4,693,800
FY 1989	$4,526,100
FY 1990	$4,485,400

In addition, Superfund extramural dollars were allocated to RSKERL as follows:

FY 1986	$ 41,600
FY 1987	$ 259,100
FY 1988	$ 397,000
FY 1989	$1,113,400
FY 1990	$ 455,500

Thus the total extramural resources over the past five years at the Laboratory were:

FY 1986	$6,572,900
FY 1987	$5,938,100
FY 1988	$5,090,800
FY 1989	$5,639,500
FY 1990	$4,940,900

Congressman Watkins

ADA FACILITY

Question: Is there any problem in terms of the adequacy of the physical facility for conducting the kind of research that is needed today or anticipated in the coming years?

Answer: The Robert S. Kerr Environmental Research Laboratory (RSKERL) in Ada, Oklahoma is one of twelve Research and Development (ORD) laboratories in nine facilities.

At the RSKERL laboratory, specifically, we estimate that the remaining repair and improvement projects total approximately $900K. Another $350K is needed to construct a day care center and do a Facility Master Plan to identify total facility needs both structural and research. In FY 1990, the RSKERL laboratory did receive $1,000K for construction of an addition to the existing building for a conference room and library.

Congressman Watkins

SUPERFUND RESEARCH

Question: Do improvements need to be made to permit research to be carried out on the highly hazardous wastes found at some of our Superfund sites?

Answer: Research on highly hazardous wastes often requires special laboratory facilities and equipment, including containment facilities, fume hoods, decontamination equipment, and storage facilities. Special or adapted instrumentation is also required.

EPA is in the process of developing a comprehensive facilities management plan to identify specific ORD laboratory needs to meet current and future scientific missions that will highlight the research and structural requirements in the buildings and facilities (B&F) request and ensure that its laboratories remain in compliance with Federal, State, and local regulations.

Questions Submitted for the Record by Congressman Green

OIL SPILL PREVENTION

Question: Last year, the Congress added $1m for "oil spill prevention, cleanup and assessment, including criteria and guidance for spill prevention control and countermeasure plans, cleanup technologies (with particular emphasis on bioremediation), and an assessment of biosystem impacts of spills and cleanup techniques such as dispersants, burning and bioremediation."

The justification on page 3-22 indicates that this money is being spent in support of the Prince William Sound clean-up and an evaluation of the effectiveness of bioremediation. Can you tell us some more about this?

I note that this year you are requesting $2m for this activity (page 3-21). You note that "oil spill technologies have not progressed over the past decade to incorporate scientific advances such as microbial degradation".

Answer. The resources provided for FY 1990 are being utilized to conduct laboratory and field research to determine the applicability and effectiveness of bio-remediation for Prince William Sound clean-up. Specifically, we are investigating the following:

- mechanism of action of oleophilic fertilizers;
- appropriate internal standards for measuring biodegradation;
- toxicity of fertilizer components; and
- potential eutrophication effects of fertilizers.

Based on data collected to date, fertilizer addition is an effective and environmentally safe form of bioremediation. The absence of adverse ecological effects observed from fertilizer application further supports bioremediation as a feasible clean-up procedure. Our ongoing research is evaluating these preliminary conclusions.

The resources requested for FY 1991 will be utilized to develop a national bioremediation response capability for oil spills. This research will build on the experience gained in Prince William Sound to develop the data necessary to provide Federal On-Scene Coordinators with the information they need to allow them to make a quick decision on the use of biological and/or chemical treatment agents for combating an oil spill. When completed, this information could be used to pre-approve selected materials which could then be stockpiled in strategic areas and which could be applied to a spill during the critical period immediately after the spill has occurred. In addition, we will be developing protocols for monitoring the effectiveness of various clean-up technologies and for the evaluation of pollution prevention, control and response techniques suitable for use on inland waterways.

Congressman Green

POLLUTION PREVENTION

Question: I'd like to discuss the waste minimization program at some length. Over the past three years, the Congress has augmented the budget with extra funds for pollution prevention state grants, most recently with $4m in FY 90.

Let me begin by saying that I find your manner of displaying these funds somewhat confusing - there is not, for example, a pollution prevention heading in the justification. I'd like to request that you provide, for the record, a summary of how the $4m add-on was spent in FY 90, as well as the add-ons in FY 89 and FY 88 - both in terms of program funds and FTEs.

Answer: In FY 88, the Agency received $4 million in the form of an Add-on to be used for pollution prevention state grants and the Pollution Prevention Clearinghouse. One million dollars was obligated by the Office of Solid Waste to create the Clearinghouse (now jointly administered by the Office of Pollution Prevention and the Office of Research and Development), and to perform other types of technical assistance such as industry case studies, data collection, and technical brochures. The remaining $3 million was carried over to FY 89. This money, along with $1 million of the $4 million Add-on for FY 89, was awarded for state grants (see attached list of grants). That round of awards left $3 million to be carried over into FY 90, of which $1.1 million is designated for programs to improve state coordination and capabilities, including support for the Pollution Prevention Clearinghouse, and the remaining $1.9 million is for state grants. Added to the $3 million requested for state grants and the $4 million Add-on, this gives the Agency a total of $10 million in FY 90. Through a competitive award process, we are recommending fundihg of about $7 million for an additional 26 state agencies to be used for the expansion or establishment of programs and the performance of demonstration projects (see attached list). This will leave about $1.9 million to be carried over into FY 91. We anticipate a third round of grants beginning in summer or early fall, with awards made in the first half of FY 91.

Currently we are administering 14 grants totaling approximately $3,925,450 for 13 state agencies and one interstate organization (see attached list). These grants are for what might loosely be termed program development: that is, for establishing or expanding basic programs that engage in technical assistance, training, outreach, and data-related activities. As mentioned above, we are recommending funding for an additional 26 state agencies to be used for the expansion or establishment of programs and for demonstration projects. Demonstration projects have been added to our focus because models of successful pollution prevention strategies, techniques, and practices are vital to help determine what does and does not work. We consider it part of our mission to share this valuable information.

to Regional Offices to begin to build their pollution prevention capabilities. 10 workyears went to the Office of Research and Development (ORD), 5 to the Office of Policy Planning and Evaluation (OPPE), and 5 to the media offices. Of the FY 90 Add-on workyears, 6 went to OPPE and 3 to the Regional Offices.

POLLUTION PREVENTION STATE GRANTS

FY 89/GRANTEE	AMOUNT
STATE OF ALASKA	$197,000.00
STATE OF IDAHO	$202,500.00
STATE OF INDIANA	$300,000.00
STATE OF KENTUCKY	$300,000.00
STATE OF LOUISIANA	$300,000.00
STATE OF MASSACHUSETTS	$288,910.00
STATE OF MICHIGAN	$240,050.00
STATE OF MISSISSIPPI	$300,000.00
STATES OF NEW ENGLAND	$297,000.00
STATE OF NEW JERSEY	$300,000.00
STATE OF NEW YORK	$300,000.00
STATE OF NORTH CAROLINA	$300,000.00
STATE OF RHODE ISLAND	$300,000.00
STATE OF TEXAS	$300,000.00
TOTAL	$3,925,460.00

FY 90/GRANTEE	AMOUNT
DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL	$293,117.00
WESTERN NEW YORK ECONOMIC DEVELOPMENT CENTER	$100,000.00
OKLAHOMA STATE DEPARTMENT OF HEALTH	$300,000.00
PURDUE UNIVERSITY	$300,000.00
CALIFORNIA DEPT. OF HEALTH SERVICES	$300,000.00
TENNESSEE DEPT. OF HEALTH AND ENVIRONMENT	$300,000.00
CENTER FOR HAZARDOUS MATERIALS RESEARCH	$300,000.00
IOWA DEPARTMENT OF NATURAL RESOURCES	$300,000.00
COLORADO DEPARTMENT OF HEALTH	$299,460.00
MINNESOTA OFFICE OF WASTE MANAGEMENT	$299,634.00
WASHINGTON STATE DEPARTMENT OF ECOLOGY	$297,000.00
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION	$288,384.00
WESTERN NEW YORK ECONOMIC DEVELOPMENT CENTER	$200,000.00
COMMONWEALTH OF VIRGINIA	$299,970.00
MISSOURI DEPT. OF NATURAL RESOURCES	$300,000.00
GEORGIA DEPT. OF NATURAL RESOURCES	$270,000.00
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY	$299,600.00
MICHIGAN STATE UNIVERSITY	$250,359.00
UNIVERSITY OF NORTHERN IOWA	$300,000.00
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS	$241,020.00
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION	$300,812.00
UNIVERSITY OF MAINE	$274,239.00
WEST VIRGINIA DEPT. OF NATURAL RESOURCES	$291,689.00
UNIVERSITY OF NEBRASKA-LINCOLN AND NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL	$300,000.00
AMERICAN SAMOA GOVERNMENT	$177,165.00
MICHIGAN DEPARTMENT OF EDUCATION	$125,163.00
TOTAL	$7,007,612.00

Question: I gather that, although funds for pollution prevention are spread throughout the various media within the budget, the central office, so to speak, is located within the Office of Policy Planning and Evaluation (OPPE). Is this a good description?

Offhand, I think this is a good idea, as it assures that the pollution prevention issue will not be dominated by a single medium. However, I consider it important that the Office have significant stature within OPPE and that its head be a suitable grade. What is its status?

Answer: The Agency has focussed its attention on pollution prevention by creating the Office of Pollution Prevention in OPPE. The cross-media nature of OPPE makes it the likely home for this truly cross-media function. This new office expands the resources devoted to pollution prevention, especially in the area of policy analysis. This expertise enables OPP to target its outreach efforts more effectively, participate in the Agency's policy development with regard to pollution prevention, and move toward incorporating pollution prevention into the full range of Agency activities. Specifically, OPP staff have the capacity to research social and technological aspects of pollution prevention in order to create and implement incentives for pollution prevention, eliminate barriers to pollution prevention in existing and planned Agency regulations, and to develop regulations which encourage waste minimization by the private sector. OPP conducts cross-media analyses on pollution prevention approaches to industrial toxics, nonpoint source pollution, and energy and transpostation issues. Moreover, OPP is pioneering efforts in the development and utilization of reliable indicators of pollution prevention and is implementing a data-collection and evaluation strategy enabling EPA to measure progress in pollution prevention activities and to target future opportunities. Also, OPP's location within OPPE fosters a strong linkage between pollution prevention and the strategic planning process, ensuring that pollution prevention is properly integrated into both the media programs' and Regional Offices' strategic plans.

The Office of Pollution Prevention oversees and manages pollution prevention projects arising from the Agency's competitive 2% Set-Aside program which provided funding to virtually all medias and the Regions for viable but innovative projects in waste minimization. These projects are described below. Also, OPP manages the state grants program, described above.

The staff of the Office of Pollution Prevention is composed of highly experienced and capable people. The Office Director is a SES employee at the ES-3 level, and the Pollution Prevention Division director is an SES employee at the ES-2 level.

Question: I'd like you to describe for me how pollution prevention activities are spread through the EPA and also provide for the record data showing the amounts of money and FTE within each area.

Answer: EPA's pollution prevention activities are being conducted in each of the media offices - the Office of Solid Waste (OSW), the Office of Air and Radiation (OAR), the Office of Water (OW), the Office of Pesticides and Toxic Substances (OPTS) - as well as in the Office of Research and Development (ORD). Our Current Estimate of the resources devoted to pollution prevention in each of these offices is attached. However, as the Agency's definition of pollution prevention is in the process of being finalized, the criteria used to estimate the levels in each office may be different and are subject to revision. The Current Estimate does not include an additional 7.0 FTE due to the OPPE reorganization or the additional 9.0 FTE (of which 3.0 FTE were for the Regions) from the 1990 Congressional Add-on.

Each of these offices, as well as several Regional Offices, will be implementing projects funded under the competitive 2% Set-Aside program in 1991. These projects, numbering 26, are the following: 1) Pollution Prevention by and for Small Business (Office of Small and Disadvantaged Business Utilization), 2) Sustainable Agriculture And Tech Transfer to Reduce Corn Herbicide Use (Region VIII and OPTS), 3) University-based Pollution Prevention Centers (OPTS), 4) Pollution Prevention Education Curriculum Proposal (Region VII and OAR), 5) Demonstration of VOC Area Source Prevention Options (ORD and OAR), 6) Integrated Permitting Proposal (OW, OSW, and OAR), 7) PP Through EPA Procurement Guidelines (OSW, Regions VII and II), 8) Pacific Northwest Pollution Prevention Research Foundation (Region X), 9) Industrial PP Through Regulation and Outreach (OW), 10) Eliminating Dioxins and Chlorines from Pulp (OPTS), 11) Chesapeake Bay Pesticide Index and Registry (Region III), 12) Promoting PP In Enforcement Settlements (Office of Enforcement and Compliance Monitoring), 13) PP Through Agricultural Chemical Management (Regions VII and X), 14) Consumer Produce Comparative Risk: Market-Based PP (OAR and OSW), 15) Lead Pollution Prevention (OTS), 16) Preventing Groundwater Contamination from Pesticides (ORD), 17) PP for Small and Medium Sized Industrial Operations (ORD), 18) Reducing Lead in Drinking Water (OW), 19) Community Planning and Implementation of PP Strategies (Region III), 20) National Association of Waste Exchanges (Region III), 21) Reduction of Toxics in Emissions and Ash from MWCs (Region IV), 22) PP and Resource Recovery through Re-mining (OSW), 23) Reduces Mobile Source Emissions with Alternative Fuels (OAR and ORD), 24) RCRA Inspectors: PP Opportunities in the Field (OSW), 25) Reduced Pesticide Application through Bioregulation (ORD), 26) State Level Conservation Projects (OAR).

Questions Submitted for the Record by Congressman Coughlin

CLEAN AIR ACT - FUNDING

Question: Mr. Reilly, I welcome this opportunity to commend you for the tremendous work you are doing at EPA. For those of us who have been in Congress for a while, I think we would all agree that your leadership in the environmental field has been a key factor in breaking the legislative logjam on the Clean Air Act.

Since the House is expected to debate the Clean Air Act reauthorization legislation within several weeks, I wonder if you would take a moment to discuss the legislation as approved by the House Energy and Commerce Committee.

Your FY 91 budget submission contains new funding requests to implement the Clean Air Act reauthorization.

Meanwhile, other reauthorizations (RCRA, Solid Waste, etc.) are moving through the committees. Should we anticipate higher funding requests throughout the next several years as new program responsibilities are assigned to the Agency?

Answer: Until reauthorizations have been enacted it is difficult to anticipate what the outyear resource requirements will be to implement them.

The FY 1991 budget requests an increase of 247 workyears and $82.5 million to implement requirements of the revised Clean Air Act. This request is based on the President's original proposal. We have not completed our evaluation of the House Committee version of the bill at this time.

Congressman Coughlin

EPA CABINET LEVEL LEGISLATION

Question: What's the current Agency position on legislation to elevate EPA to a Cabinet level?

Answer: President Bush endorsed the bipartisan effort to elevate EPA to Cabinet status on January 24, 1990, in his State of the Union address. The President stated that environmental challenges are so important that they must be addressed from the highest level of government. Elevating EPA to Cabinet status reflects the Administration's commitment to the American people that the environment has moved from the margins to the mainstream in our government's policies and decisions and that Cabinet status would place EPA in a more appropriate position in helping to influence the world's environmental policy. The Administration supported S. 2006 as originally introduced. As it passed the House, H.R. 3847 contains a number of provisions to which the Administration is strongly opposed.

Question: Discuss for a moment, if you will, why the House-passed legislation is so troublesome?

Answer: The Administration is opposed to certain provisions in H.R. 3847 because, as stated in the statement of Administration position prepared for House action on the bill, these provisions would interfere unacceptably with the President's authority to manage the Executive Branch and with the functioning of the new Department of Environmental Protection. The President's senior advisers, including EPA's Administrator and the Attorney General, would recommend a veto of H.R. 3847 in its current form. Specific provisions involve the Bureau of Environmental Statistics, the President's authority to appoint Department officials and to organize Department offices and functions, and the Department's ability to use contractors.

Congressman Coughlin

Alaska Oil Spill

Question: A large portion of the EPA appropriations hearings last year was dedicated to the environmental ramifications of the disastrous Valdez oil spill in Alaska. Please give us an update on the Agency's role in the clean-up.

Answer: EPA continues to assist the U.S. Coast Guard and the National Oceanic and Atmospheric Administration in Federal cleanup efforts of the Valdez oil spill. EPA is providing technical assistance in cleanup and disposal activities associated with the efforts underway this field season. Additionally, EPA's Office of Research and Development is continuing the bioremediation research in cooperation with Exxon and the State of Alaska.

EPA, the State of Alaska, and the Trustee Agencies are cooperating in the development of a restoration plan for restoring the damaged ecology of Prince William Sound and the Gulf of Alaska. Public and experts meetings have been held in Alaska to explore options and alternatives for restoring the specific resources as well as the total ecosystems. A literature review of restoration techniques is underway which will be used to develop feasibility studies on habitat or specific species restoration. A report on the present efforts is expected to be available to the public in July 1990.

Congressman Coughlin

SUPERFUND TOXIC SITES

Question: The current edition of Legal Times reports on a disturbing situation with EPA's contract labs.

According to the article, three -- and possible more -- of your contract labs have falsified key data "used to evaluate the toxicity" of sites under study for inclusion in the Superfund program.

The contractors being investigated in the probe, according to the Legal Times, represent about 10 percent of the labs which test waste-site samples under contract.

Your own assistant inspector general, John Barden, is quoted as stating the situation "..means the whole testing program can be called into question." Quite frankly, this is a very serious situation not only to the operation of the actual cleanups at specific sites, but I would assume, to the Agency as well in its aggressive campaign to have PRPs assume the cost burdens of cleanup.

Please give us an update on the probe and provide us any assurances you can about the integrity of the Superfund toxic site samples accuracy.

Answer: Approximately 10 commercial environmental testing laboratories, out of a total of 114 laboratories under contract to EPA to provide testing results for Superfund site samples, are currently being investigated by EPA's Office of the Inspector General. The allegations relate to the falsification of laboratory testing results. Final action on these investigations has not yet been completed. The Department of Justice has filed a consent judgment to resolve one civil complaint case and in three other cases the laboratories have been suspended from future Federal assistance and procurement. In any event, EPA has stopped shipping site samples to all 10 laboratories being examined until the matter is settled.

If EPA determines that falsification of data has occured, EPA will proceed to assess the impacts on the scientific validity and use of the test results. This will be done on a sample by sample and site by site basis. EPA will make these assessments as soon as the extent and nature of the problem is known.

Congressman Coughlin

INTERNATIONAL ACTIVITIES

Question: Given the rapid changes in Eastern Europe, what initiatives is the Agency undertaking in your Office of International Affairs to share our Nation's experiences in reducing pollution?

Many of the new leaders in these countries are just entering public life and they face tremendous problems. I think we have a chance here to help these countries by sharing our experiences through information transfers on reducing pollutants at very little cost.

Answer: Drawing on experience gathered from numerous contacts with East European environmental managers and researchers, EPA began last year to work with the State Department and the White House to shape the environmental initiatives proposed by the President and embodied in the SEED Act of 1989. We are continuing to pursue mutually beneficial research with our counterparts in Poland, Yugoslavia and Hungary under the bilateral Science and Technology Agreements. Under the guidance of the Presidentially appointed coordinator of assistance to Eastern Europe, EPA is playing a major role in implementing the environmental assistance provisions of the SEED Act. These programs focus on (1) improving air pollution monitoring capabilities and drinking water quality and availability in Krakow, Poland, and (2) the establishment of a Regional Environmental Center in Budapest.

The Regional Center is particularly well-suited to promote technical assistance and provide information on approaches to environmental problems throughout the region. The key programs will focus on information collection and dissemination, development of institutional capabilities, environmental education and training, and clearinghouse functions. Pollution prevention has been identified as one of the first topics of emphasis.

Congressman Coughlin

POLLUTION PREVENTION TECHNOLOGY

Question: Last year, EPA was directed to cost share in the demonstration of a new pollution prevention technology that significantly reduces coke oven emissions. $2.5 million was provided to initiate scale-up from current prototype testing activities.

In light of the potential impact the Clean Air Act reauthorization will have on coke ovens and the steel industry, it would seem that this technology demonstration is more timely than ever.

Please bring us up to date on the status of the cost-sharing demonstration.

Answer: The technology referred to in this question is the "dry" quenching of coke in an enclosed externally water cooled box. The principle of total confinement prevents the release of any emissions to the environment.

A request for proposal (RFP) will be issued in the middle of May. As soon as a proposal is selected, probably in June, installation of the test equipment will begin to be followed by the actual test and evaluation phase. It is anticipated that the entire demonstration project should take about one year.

Congressman Coughlin

HAZARDOUS WASTE DISPOSAL

Question: I understand EPA is considering new and less stringent standards for the treatment of hazardous wastes under your final land ban rule. I've been in touch with Assistant Administrator Clay and appreciate the timely memo you forwarded to my office this week.

If I can for a moment, I understand the standards revision would allow wastes with 100-1000 times more toxic properties to be placed in landfills than would otherwise be permissible if the Agency followed the approach it has defended in the Court of Appeals.

In your statement yesterday, Mr. Reilly, you listed as a major priority of the Agency "pollution prevention." You stated, "Pollution needs to be prevented before it becomes a problem."

Yet, is it not possible that with the new land toxicity waste treatment standards, the Agency is condoning inadequate treatment and disposal -- treatment that can only serve to create the Superfund sites of the future?

Wouldn't it be more environmentally sound to require the most stringent treatment possible for toxic waste which will be disposed of in land? This is the very course mandated by the 1984 RCRA Amendments.

Shouldn't we require the best treatment and containment for land disposal of toxic wastes?

Answer: The land disposal restrictions program bases treatment standards for hazardous wastes on best demonstrated available technology (BDAT). The "Third Third" final rule, signed on May 8, 1990, establishes treatment standards for 349 listed and characteristic wastes. Treatment standards established in the Third Third final rule do not depart from BDAT.

Treatment standards are specified below the characteristic level for six extraction procedure (EP) toxic pesticide non-wastewaters and reactive cyanides. In addition, methods that require treatment below the characteristic level are specified for ignitables with high total organic carbon and six EP toxic pesticide wastewaters. Concentrations are specified at the characteristic level for all EP toxic metals except selenium, which is slightly higher than the EP level because data are not available demonstrating that lower levels are achievable.

For EP toxic nonwastewaters, EPA determined that there is insufficient information to justify treatment requirements below the characteristic level at this time. For these wastes, data in the administrative record are not adequate to determine whether treatment below characteristic levels is feasible for the wide range of differing waste matrices encompassed by a single characteristic waste code. Treatment to the characteristic level results in substantial treatment and reduction in toxicity - often exceeding 90%. In these cases, EPA established a treatment level based on its best judgement on the information currently available, and will review its decision in light of any new information gained in the future.

EP toxic inorganic wastewaters are primarily destined for National Pollutant Discharge Elimination System (NPDES) wastewater treatment systems, pretreatment systems, and underground injection control (UIC) injection wells. Given data EPA could set treatment levels below the characteristic levels for some of the EP toxic metal wastewaters. Imposing treatment standards below the characteristic level, however, could have the affect of invalidating legitimate methods of treatment involving surface impoundments that are part of Clean Water Act (CWA) wastewater treatment trains (equalization basins used to equalize flows to centralized chemical percipitation and sedimentation treatment, for example). Such systems have been sanctioned under these statutes and are the result of a decade of progress in these programs. As a result, EPA is not imposing treatment standards below characteristic levels for such wastewaters. Based on the information in the rulemaking record, virtually all wastewaters are managed in the context of CWA treatment impoundments or UIC wells.

For most corrosive, reactive, and ignitable characteristic wastes, EPA has determined that either the appropriate treatment for these wastes is to remove the characteristic or, where these wastes pose a toxicity concern, additional treatment beyond removal of the characteristic must be performed. The environmental concerns from the properties of ignitability, corrosivity, and reactivity are different from the environmental concerns from EP toxic wastes. Removal of the characteristic removes the hazard for which the waste was deemed hazardous. However, we recognize that some of these wastes still may pose a problem due to the presence of hazardous constituents. Thus, where these wastes pose an ascertainable toxicity concern, as with high total organic carbon ignitable wastes and cyanide-bearing and sulfide-bearing reactive wastes, EPA has developed treatment standards that address the toxicity concern and (in effect) require treatment below the characteristic level. Otherwise, treatment that removes the properties of ignitability, corrosivity, and reactivity, fully address the environmental concern from the properties themselves.

In summary, EPA believes treatment standards for the characteristic wastes will result in substantial reductions in toxicity and mobility, thus minimizing threats to human health and the environment. These standards are the most protective standards supportable by available treatment data.

Congressman Coughlin

WASTE TREATMENT TECHNOLOGY

Question: Your Municipal Innovative Technology Evaluation (MITE) program would appear to offer help to states and localities as they seek to reduce and treat their municipal waste stream.

Answer: The MITE program is designed to spur the implementation of innovative technologies for managing municipal solid waste (MSW). The program will benefit states and localities by providing unbiased evaluations of innovative technologies as they become available. In the MITE program, the technology developer will pay for demonstrating the technology and the Agency will pay the cost for testing and evaluating the technique and reporting the findings.

Question: In the hazardous waste portion of the justification (5-19) the legend comments that a cooperative agreement with DOE has been signed to investigate the use of solar energy to treat and dispose of waste.

Would you discuss this cooperative agreement for a moment and tell us how much is proposed in the FY 1991 budget for this program and how much is being allocated in FY 1990?

Answer: The FY 1990 budget allocates $243.5K for conducting cooperative research with the Department of Energy (DOE) to demonstrate and evaluate solar energy applications for hazardous waste treatment and disposal. For the past 3 years and at the invitation of DOE, representatives from ORD's Risk Reduction Engineering Laboratory (RREL) in Cincinnati, Ohio have been following the progress of and providing technical advice to DOE's/Solar Energy Research Institute (SERI) regarding their experimental efforts to develop and evaluate a Solar High Temperature Waste Detoxification system. A Review Board has been established to steer the progress of this project and provide technical input.

EPA is using the $243.5K to support certain hazardous waste research studies where DOE has not fully explored the performance potential, application, or reliability of using solar energy to treat and dispose of hazardous waste. This research has two main components:

1) DOE has tested single hazardous waste compounds in relatively simple liquid or solid matrices. Further, laboratory and model explorations of multi-compound mixtures in more realistic matrices will determine the pragmatic applicability of this technology.

2) Application and design of a through-type solar reflector to treat hazardous waste.

The work proposed by EPA has been discussed and coordinated with DOE representatives and DOE's contractors and they concur that these activities are appropriate for EPA to pursue.

Due to increased interest in DOE on this work and other competing high priorities within EPA, current FY 1991 planning does not include any resources for EPA to continue work in this area. However, we will continue to provide technical assistance to the Solar Thermal High Temperature Waste Detoxification Review Board.

Congressman Coughlin

WASTE TREATMENT TECHNOLOGY

Question: Also on 5-20, the legend remarks that in 1989 the agency evaluated emerging alternative municipal and hazardous waste treatment technologies. Could you elaborate on what the agency found during its evaluations?

Answer: Small-scale studies were conducted in several areas in support of both the municipal and hazardous waste programs. Establishing Best Demonstrated Available Technology (BDAT) for hazardous wastes was the focus of the following activities.

- Bench-scale studies of the destruction of cyanide-bearing metal finishing waste showed that wet air oxidation could reduce total cyanide well below the BDAT standard of 590 mg/kg.
- Bench-scale evaluation of the biodegradability of a 2-ethoxyethanol wastewater indicated a high degree of degradation and led to biological treatment being selected as BDAT.
- Small pilot-scale steam stripping of an aqueous solution of 2-nitropropane showed effective removal of the material from the water. Steam stripping followed by carbon treatment has been adopted as BDAT for that wastewater.
- Bench-scale testing of a biological system for removing mercury from wastewaters was initiated. Although the study is not complete, separation of the mercury into the biomass appears technically feasible.

Other significant activities included the following:

Anaerobic/Aerobic Treatment of Leachate: A combined anaerobic/aerobic biological treatment system was shown to offer advantages over either system alone. An upflow anaerobic filter removed 90-98 percent of ketones and chlorinated aliphatic solvents thereby reducing air emissions in subsequent aerobic treatment.

White Rot Fungus: Research was conducted to determine optimum conditions for growth and enzyme synthesis for degradation of chlorinated aromatics (phenolics) using pulp mill liquor (Kraft). The process removed 90-95 percent of 2,4-dichlorophenol and 2,4,6-trichlorophenol.

CERCLA Leachate Treatment Using Anaerobic Pretreatment: Variations of anaerobic, granular activated carbon reactors and upflow anaerobic filters have demonstrated the capability of effectively removing most toxic organics from both weak and high strength CERCLA leachates. Removals of a variety of volatile and semi-volatile organics have generally exceeded 90 percent.

In the area of municipal wastewater technology evaluations, four process/systems evaluations were completed. These included two processes which intensify conventional biological treatment capacity through modification, and two sludge processing technologies which have future promise; in-vessel composting and low-energy incineration systems. Also, one evaluation of a combination biological treatment-sedimentation device continued with modest funding, and three new evaluations, i.e., low-cost sewers, constructed wetlands for treatment and improved ultraviolet light disinfection, were initiated.

Congressman Coughlin

HAZARDOUS WASTE

Question: Last year your justification stated that the Agency expected fifty states to be authorized for the Federal hazardous waste base program. This year, the justification on page 5-34 states that it won't be until 1991 that "almost all states" will be authorized for the RCRA base program. What's the problem with state authorization?

Answer: The Agency believes authorization for the base program has proceeded at an adequate pace. At this time, 44 states, the District of Columbia, and Guam are authorized for the RCRA base program. The unauthorized states are: Alaska, California, Connecticut, Hawaii, Iowa, and Wyoming. California and Connecticut have submitted applications to the Agency. Alaska and Hawaii are revising state regulations and statutes in order that they can qualify for the program. Iowa and Wyoming are not preparing applications for the RCRA base program at this time. In the past, small hazardous waste universes and the costs associated with the base program have been disincentives for these two states to adopt the program.

Congressman Coughlin

SITE PROGRAM

Question: Earlier today, you mentioned the Superfund Innovative Technology Evaluation (SITE) Program.

I am particularly interested in and supportive of this program. As you may know, a Superfund site in my district (Tyson's Dump) is being cleaned up as we speak by an innovative treatment technique. So far, EPA's action on the site has been a success story and I commend all the individuals working on the cleanup.

Would you take a moment to share with the committee some of the innovative treatment technologies supported by SITE?

What is your budget request for SITE in FY 1991?

Answer: The Superfund Innovative Technology Evaluation (SITE) Program was established to develop reliable performance and cost information on innovative alternative technologies that could be used in remediation decision-making for hazardous waste sites. There are four components of SITE -- the Demonstration Program, the Emerging Technologies Program, the Monitoring and Measurement Technologies Program, and the Technology Transfer Program.

These clean-ups are both federal and private sector lead sites. Some of the technologies that have received site funding under the demonstration program includes:

- Terra Vac/vacuum extraction
- Ultrox/UV radiation-ozonation
- Ogden/circulating bed combustor
- IWT/Geocon in-situ solidification stabilization
- Westinghouse Shirco/electric infrared combustion
- Toxic Treatment/vacuum extraction steam stripping

These technologies are being used at a number of sites in clean-up operations. For example, Terra Vac is cleaning up the Tyson Dump site in Philadelphia, PA, and four to five other Superfund sites. Terra Vac is also being used at nearly 100 other sites, many of which are Underground Storage Tank applications (leaking gasoline tanks).

In the SITE Demonstration Program, 38 technologies are presently active representing five process categories. There are currently seven thermal, five biological, nine solidification/stabilization, four chemical, and thirteen physical technologies in the program. To date, EPA has completed 14 technology field demonstrations.

The major accomplishments of the SITE Demonstration Program in FY 1989 include:

- Twelve new technology developers were accepted into the SITE Demonstration Program under the fourth solicitation cycle.
- At least 10 technologies are now in the planning stages for field demonstrations.
- Twelve reports, including eight Technology Evaluation Reports and four Applications Analysis Reports, were published on eight of the completed demonstrations. Eleven additional reports are in different stages of preparation and review.

The Emerging Technologies Program was established to promote the development of innovative alternative technologies. Laboratory bench- and pilot-scale technologies that are not yet ready for field demonstration are evaluated for their potential for future field use. There is currently a total of 15 bench- and pilot-scale technologies in the program. The Emerging Technologies Program assures that technologies can be tested early in their development, and that promising technologies can "feed" into the Demonstration Program.

The major accomplishments of the SITE Emerging Technologies Program in FY 1989 include:

- Results to date were sufficiently encouraging to warrant approval for second-year funding for five of the projects from the first solicitation.
- Seven new bench- or pilot-scale technologies were accepted from the second solicitation, and one additional technology was accepted from the first solicitation.
- EPA has evaluated 47 pre-proposals submitted in response to the third solicitation issued in July 1989.

The Budget request for the total SITE program (R&D) in FY 1991 is $19.2 million.

Congressman Coughlin

ASBESTOS

Question: The January 1990 issue of Science magazine an article on Asbestos which concluded that:

> The available data and comparative risk assessments indicate that chrysotile asbestos, the type of fiber found predominantly in U.S. schools and buildings, is not a health risk in the nonoccupational environment. Clearly, the asbestos panic in the U.S. must be curtailed, especially because unwarranted and poorly controlled asbestos abatement results in unnecessary risks to young removal workers who may develop asbestos-related cancers in later decades...

This received a lot of attention in the press, who portrayed the article as suggestion of a 180 degree change in the way asbestos is approached.

At the current time, we remove it or encapsulate it. The Press says the article suggests we should do worker education and building maintenance.

What is EPA's position on both the article and on Asbestos?

Answer: Asbestos is known to cause cancer and other diseases if fibers are inhaled into the lungs and remain there. This conclusion is based on studies involving human exposure, particularly exposure at high levels. While evidence is better for some types of asbestos, there is no clear proof that other types are not as potent. EPA, based on careful evaluation of available scientific evidence, has adopted a prudent approach in its regulation of assuming that all fibers are equally potent. While, as the Science article indicated, exposure to chrysotile or common white asbestos may be less likely to cause some asbestos-related diseases, various scientific organizations, including the National Academy of Sciences, support EPA's more prudent regulatory approach.

EPA supports the suggestion made in the article that asbestos abatement be accomplished through education and maintenance rather than through ill-advised removal efforts that may cause unnecessary exposure. In fact, EPA only requires asbestos removal in order to prevent significant public exposure to asbestos fibers during building renovation or demolition. It is likely that during major building renovation or demolition, asbestos material will be damaged or disturbed to the extent that significant amounts of asbestos fibers would be released, with resultant exposure risks to workers and the general public. Consequently, EPA requires asbestos removal prior to such activities. Absent demolition or renovation, however, EPA recommends in-place management programs whenever asbestos is detected. In-place management activities include training and education (particularly for building maintenance and service workers), awareness of the presence of asbestos on the part of building owners, managers, occupants and workers, periodic surveillance, and special control procedures including but not limited to encapsulation.

Congressman Coughlin

DIOXIN

Question: EPA is under court order to address the problem of dioxin in paper and dioxin contamination in commercial chemicals. Would you give us an update on the agency's activities under the court order.

Answer: On April 30, 1990, EPA announced its decisions on the need for regulating dioxins/furans in pulp mill effluents, pulp mill industrial sludges, and bleached wood pulp and paper products. These decisions are the result of a two-year interagency effort involving EPA, the Food and Drug Administration (FDA), and the Consumer Product Safety Commission (CPSC). The three agencies concluded that low levels of dioxin associated with chlorine bleaching of wood pulp pose a risk significant enough to require regulatory control.

Specifically, EPA and the states will develop effluent discharge permits under the National Pollution Discharge Elimination System (NPDES) to ensure that discharges from pulp and paper mills meet all applicable requirements of the Clean Water Act. In addition, EPA is developing effluent limitation guidelines and standards under the Clean Water Act to reduce dioxin contamination and total chlorinated organics from the production of bleached pulp. This will reduce dioxin contamination in waterways and in aquatic life found in such waterways. A major finding in the interagency review was that the dioxin exposure risk to consumers of fish taken from waters downstream of some pulp and paper mills may be significant.

Secondly, EPA will issue standards under the Toxic Substances Control Act (TSCA) and the Resource Conservation and Recovery Act (RCRA) to address risks from the disposal of dioxin-contaminated wastewater treatment sludge from pulp and paper mills. The TSCA rule will address the use of sludge as a soil conditioner, while RCRA authority will be used to establish management practices guidelines for landfills and sludge lagoons containing sludge from pulp and paper mills.

Finally, EPA will formally refer to FDA the responsibility for addressing and managing risks from dioxin exposure in food contact and packaging papers.

In addition, while not a part of the consent agreement, EPA is proposing an initiative to accelerate dioxin pollution reduction through process modifications and the use of substitutes for chlorine in bleaching processes. The initiative will involve industry, environmental groups, other federal agencies, the states and the international regulatory community.

EPA's decisions are consistent with the requirements of a 1988 consent agreement between EPA, the Environmental Defense Fund and the National Wildlife Federation. That agreement specified that by April 30, 1990, EPA would take one or more of the following actions: announce a schedule to propose regulations; refer some or all of the matters under consideration to another agency or agencies; determine that regulations or referrals were unnecessary, providing a justification for that determination; or determine that the Agency lacked sufficient data to act and provide a schedule to obtain additional data.

Congressman Coughlin

CARBOFURAN

Question: Last year's committee report urged you to give careful consideration to the final decision on Carbofuran, including the lack of good substitutes. The report also said "an overall policy on granular pesticides should also be accelerated to place the ecological risks presented by other products in perspective."

What is the status of the Agency's efforts to develop the policy? When will the policy be finalized?

Answer: The Agency is currently giving careful consideration to all potential alternatives, including non-chemical ones, on all carbofuran use sites.

The Agency is nearing completion of a comparative analysis of avian risk from granular pesticides that will place the avian risk posed by carbofuran in the context of risk posed by other granulars. The document, scheduled for distribution next month, will explain in detail the Agency's methodology for assessing avian risk from granular formulation pesticides, including calculation of the number of lethal doses per square foot, with confirmatory field studies and monitoring data. The document further lists those compounds determined by the Agency to be of concern due to the risk they pose to avian species. The avian-granular document is a statement of relative risk; no regulatory options are presented.

Congressman Coughlin

GRANULAR PESTICIDES

Question: What impact is the policy's development having, if any, on granular pesticides currently under examination by the Special Review and Reregistration Division?

Answer: The comparative analysis of avian risk from granular pesticides has elucidated the granular compounds posing highest risk to birds and provides a ranking of these compounds. The further evaluation of these compounds will proceed on a case-by-case basis.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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ENVIRONMENTAL PROTECTION AGENCY

Justification of Appropriations Estimates for the Committee on Appropriations

FISCAL YEAR 1991

BUDGET SUMMARY

The President's 1991 Budget request for the Environmental Protection Agency's totals $5,580,709,000 supported by 16,761 workyears. These resources include $2,127,000,000 and 12,853 workyears for the Agency's environmental operating programs; $38,709,000 and 350 workyears for the Inspector General's activities; $1,740,000,000 and 3,467 workyears for the Superfund program; $75,000,000 and 90 workyears for the Leaking Underground Storage Tank (LUST) program; and, $1,600,000,000 for the Construction Grants program. When compared with the Agency Total current estimate, the President's request represents an overall increase of $48,246,000 and 919 total workyears. The following chart provides a summary of budget authority for EPA'S eight appropriations:

Budget Authority
(dollars in thousands)

	1990 Enacted	1990 Current Estimate	1991 President's Request	Increase + Decrease - 1990 vs 1991
Salaries & Expenses......	$861,027	$863,998	$999,700	+$135,702
Office of the Inspt. General..	31,242	30,903	38,709	+7,806
Research & Development...	237,757	229,950	249,000	+19,050
Abatement, Control & Compl.	817,076	796,915	865,300	+68,385
Buildings & Facilities......	14,768	14,652	13,000	-1,652
OPERATING PROGRAMS Subtotal........	1,961,870	1,936,418	2,165,709	+229,291
Hazardous Substance Superfund.......	1,550,588	1,530,228	1,740,000	+209,772
Leaking Underground Storage Tanks (LUST)....	74,822	74,097	75,000	+903
Construction Grants (CG).....	2,018,225	1,991,720	1,600,000	-391,720
Subtotal........	$5,605,505	$5,532,463	$5,580,709	+$48,246
CG rescission of unobligated bal.	-47,700	-43,691 a/	0	+43,691
AGENCY TOTAL(NET)	$5,557,805	$5,488,772	$5,580,709	+$91,937

APPROPRIATIONS HIGHLIGHTS

The 1991 President's Budget Request will provide the necessary resources for the Environmental Protection Agency (EPA) to initiate new program activities while continuing emphasis on accelerating ongoing programs. The Agency will step up concentration on preventing pollution at its source; implementation of the President's proposed "Clean Air Act Amendments of 1989"; realizing the President's goal of strengthening environmental enforcement and ensuring compliance with new and existing statutes; building and maintaining State capacity and a strong State-Federal partnership that is so crucial for effective environmental protection; and, provide for the first time nonpoint source grants for the implementation of state nonpoint source pollution prevention and control strategies. In 1991 the Agency will continue implementation of the recommendations of the 1989 Superfund Management Review (SMR), placing emphasis on an "enforcement first" approach to Superfund cleanup activities as well as increasing response activities as recommended in the SMR.

The following briefly describes the 1991 request, the purpose, and the major changes from the Agency's 1990 estimates for each of EPA's eight appropriations. In addition, in the 1991 request it is proposed that we fund repair and improvement projects under $75,000 from each of the operating program accounts except the Office of the Inspector General.

SALARIES AND EXPENSES

The Agency's 1991 request of $999,700,000 represents an increase of $135,702,000 (16%) over the 1990 current estimate for Salaries and Expenses. This appropriation finances all staff costs associated with administering the environmental operating programs within the Agency's Regional and Headquarters operations. The increase in resources will enable the Agency to continue expanding the Administration's commitment to protecting human health and the environment. These resources incorporates all costs exclusive of grant programs and program-specific contractual agreements.

RESEARCH AND DEVELOPMENT

For 1991 EPA is requesting $249,000,000 for the Research and Development appropriation, an increase of $19,050,000 (8%) over the 1990 current estimate. This appropriation finances research contracts, grants and agreements with universities and private industry, as well as in-house activities, to produce the scientific knowledge and technologies necessary for regulating, preventing and abating pollution. The Agency plans to direct major increases in 1991 toward strengthening the Agency's long-term research capabilities, enhancing global climate change research, addressing research needs of the President's Clean Air Act legislation, and supporting media program needs.

ABATEMENT, CONTROL AND COMPLIANCE

The Agency is requesting $865,300,000 for the Abatement, Control and Compliance appropriation, an increase of $68,385,000 (9%) over the 1990 current estimate. This appropriation finances contracts, grants, and cooperative agreements for pollution abatement, control and compliance activities. The 1991 request includes resources for a new state grant program that will provide states with the financing to replace construction grant set asides until states put in place alternative funding sources. In addition, the request includes funding for implementation of the President's proposed Clean Air Act legislation. Resources will be used for new activities including training and technical support for state and local governments.

BUILDINGS AND FACILITIES

The Agency is requesting $13,000,000 for the Buildings and Facilities appropriation. This represents a decrease of $1,652,000 (11%) below the 1990 current estimate which is due to the completion of a one-time project. This appropriation finances the construction of new facilities and the repair, improvement, alteration, and purchase of fixed equipment for facilities which the Agency currently leases or owns. The requested level will permit the Agency to continue to ensure healthy and safe working conditions.

HAZARDOUS SUBSTANCE SUPERFUND

This appropriation finances responses at uncontrolled hazardous waste sites and emergency releases of hazardous substances. The President's 1991 Budget request of $1,740,000,000 for Superfund represents an increase of $209,772 (14%) over the 1990 current estimate. This increase represents a strong and continued commitment on the part of the Agency to meet its responsibilities to protect human health and the environment. The 1991 President's Budget continues to implement the Superfund Management Review (SMR) initiatives of "enforcement first", strong cleanup programs, and effective Federal response.

Consistent with the President's "Building a Better America" message and the Agency's emphasis on enforcement efforts, a significant increase of $16 million requested to ensure privately-financed response actions and vigorous pursuit of now settling private parties for cost recovery. The Department of Justice will receive $32.3 million of this request to ensure adequate support for the increasing Superfund caseload. In addition, the Agency will increase the Response program by $196 million. This increase will support the most environmentally significant projects first while balancing the Agency's statutorily mandated actions and ongoing activities.

LEAKING UNDERGROUND STORAGE TANKS (LUST)

The Agency is requesting $75,000,000 in 1991, an increase of $903,000 (1%) above the 1990 current estimate. This appropriation established a response program for the prevention and remediation of releases from leaking underground petroleum storage tanks. The request will maintain the LUST program's momentum and the Agency's strong commitment to building state capacity necessary to protect human health and the environment. The 1991 President's Budget will provide funding for cooperative agreements with states and territories to help them achieve the response and enforcement capacity necessary to implement their own LUST programs.

CONSTRUCTION GRANTS

Fiscal Year 1991 is a transitional year for the Construction Grants program. This year funds for this appropriation will no longer be used to finance grants to local public agencies for construction of municipal wastewater treatment facilities. The 1991 request for this appropriation will finance State

Revolving Funds (SRFs). Once Federal authorization is completed in 1994, together with the State match, SRFs should be self sufficient. SRFs will make loans to local public agencies for construction of municipal wastewater treatment facilities, thereby assisting States and localities in attaining established water quality standards. The President's request of $1,600,000,000 for the Construction Grants appropriation in 1991 represents a decrease of $391,720,000 (20%) below the 1990 current estimate. However, because the mix of Construction Grant and SRF grant change, 1991 will see a $598 million increase (60%) in SRF funding.

Finally, the 1991 request contains $15,700,000 for the U.S. share of the construction costs of an international wastewater treatment plant in San Diego, California to treat Tijuana, Mexico wastewater. These funds will be made available once Mexico agrees to pay all operating and maintenance costs and the full cost of any subsequent expansion of plant capacity.

OFFICE OF THE INSPECTOR GENERAL

The Agency is requesting $38,709,000 for the Office of the Inspector General. Of this amount, $25,027,000 is to be derived from the General Fund, $13,107,000 from the Hazardous Substance Superfund, and $575,000 from the Leaking Underground Storage Tanks Trust Fund. This represents an increase of $7,806,000 (25%) above the 1990 current estimate. With this appropriation the Office of the Inspector General will be able to continue its audits and investigations relating to EPA programs and operations, thereby promoting economy, efficiency, and effectiveness throughout the Agency; prevent and detect fraud and abuse and keep the Administrator and Congress advised of problem areas and related corrective actions as well as review EPA regulations and legislation.

TRANSFER AUTHORITY (Administrative Provision)

The Agency is requesting appropriations transfer authority. The authority would be exclusive of the Trust Funds and Construction Grants appropriations and would be limited to 7 per centum. The 7 percent limit would apply to both the losing and receiving appropriations. This authority will provide the Agency the flexibility it needs to target resources to meet new and emerging environmental priorities and Congressional mandates. In an Agency as complex as EPA, situations frequently arise where changes must be made to priorities established almost 18 months in advance or to methods needed to achieve priorities. The ability to meet the requirements of the Agency's programs will be greatly enhanced with the authority.

a/ The amount shown as rescinded unobligated balances does not include $3,986,884 ordered preserved by the U.S. District Court. The actual amount available for rescission is $47,678,276.

ENVIRONMENTAL PROTECTION AGENCY

Summary of Budget Authority, Obligations, Outlays, and Workyears By Appropriation (dollars in thousands)

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Salaries and Expenses				
Budget Authority........	$ 815,000.4	$ 861,026.6	$ 863,998.1	$ 999,700.0
Obligations.............	808,774.9	861,026.6	863,998.1	999,700.0
Outlays.................	834,444.0	833,445.0	836,000.0	969,794.0
Permanent Workyears.....	11,114.0	11,889.2	11,368.7	12,540.5
Total Workyears.........	11,457.6	11,890.2	11,751.2	12,540.5
Research and Development				
Budget Authority........	$ 202,500.0	$ 237,757.0	$ 229,949.9	$ 249,000.0
Obligations.............	201,325.0	235,581.6	227,878.0	249,521.0
Outlays.................	182,467.0	222,729.0	219,853.0	240,592.0
Abatement, Control, and Compliance				
Budget Authority........	$ 719,625.3	$ 817,076.0	$ 796,914.6	$ 865,300.0
Obligations.............	706,387.0	828,249.2	807,943.0	863,659.0
Outlays.................	623,190.0	783,670.0	775,802.0	832,350.0
Buildings and Facilities				
Budget Authority........	$ 8,000.0	$ 14,768.0	$ 14,652.0	$ 13,000.0
Obligations.............	6,592.7	24,543.6	24,723.0	13,000.0
Outlays.................	15,118.0	19,453.0	19,436.0	12,942.0
Office of Inspector General				
Budget Authority........	$ 0.0	$ 31,242.3	$ 30,903.3	$ 38,709.0
Obligations.............	0.0	31,242.3	30,903.3	38,709.0
Outlays.................	0.0	18,745.0	18,542.0	30,951.0
Permanent Workyears.....	0.0	310.6	310.6	350.4
Total Workyears..........	0.0	310.6	310.6	350.4
Scientific Activities Overseas				
Obligations.............	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Outlays.................	49.0	250.0	250.0	250.0

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
SUBTOTAL, OPERATING PROGRAMS				
Budget Authority........	$1,745,125.7	$1,961,869.9	$1,936,417.9	$2,165,709.0
Obligations.............	1,723,079.6	1,980,643.3	1,955,445.4	2,164,589.0
Outlays.................	1,655,268.0	1,878,292.0	1,869,683.0	2,086,888.0
Permanent Workyears.....	11,114.0	12,199.8	11,679.3	12,890.9
Total Workyears.........	11,457.6	12,200.8	12,061.8	12,890.9
Hazardous Substance Superfund				
Budget Authority........	$1,410,000.0	$1,550,588.1	$1,530,228.1	$1,740,000.0
Obligations.............	1,543,719.5	1,598,039.3	1,578,322.0	1,740,000.0
Outlays.................	958,195.0	1,328,814.0	1,324,538.0	1,520,333.0
Permanent Workyears.....	2,424.0	2,967.2	3,345.7	3,467.2
Total Workyears.........	2,796.4	3,467.2	3,467.2	3,467.2
LUST Trust Fund				
Budget Authority........	$ 50,000.0	$ 74,822.1	$ 74,097.0	$ 75,000.0
Obligations.............	50,875.4	78,279.6	77,555.0	75,000.2
Outlays.................	32,859.0	35,707.0	35,489.0	49,299.0
Permanent Workyears.....	81.0	91.3	85.7	90.4
Total Workyears.........	82.4	91.3	91.3	90.4
Construction Grants				
Budget Authority........	$1,950,000.0	$2,018,225.0	$1,991,720.0	$1,600,000.0
Obligations.............	2,531,237.0	2,305,233.0	2,305,233.0	1,697,930.0
Outlays.................	2,349,827.0	2,363,092.0	2,362,668.0	2,338,857.0
Operations, Research and Facilities				
Obligations.............	$ 0.0	$ 50.0	$ 50.0	$ 50.0
Outlays.................	0.0	250.0	250.0	250.0
Tolerances Revolving Fund				
Obligations.............	$ 806.7	$ 1,000.0	$ 1,000.0	$ 1,000.0
Outlays.................	(293.0)	(200.0)	(200.0)	(200.0)

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Misc. Contrib. Funds				
Obligations.............	$ 4.3	$ 10.0	$ 10.0	$ 10.0
Outlays.................	2.0	10.0	10.0	10.0
Reregistration & Expedited Processing Revolving Fund				
Obligations.............	$ 5,303.6	$ 33,851.0	$ 33,851.0	$ 18,000.0
Outlays.................	(16,040.0)	(11,000.0)	(11,000.0)	7,100.0
Permanent Workyears.....	132.0	0.0	148.0	238.5
Total Workyears.........	33.6	0.0	148.0	238.5
Reimbursements - S&E				
Obligations.............	$ 15,751.7	$ 20,000.0	$ 19,947.0	$ 20,000.0
Permanent Workyears.....	67.0	74.0	74.0	74.0
Total Workyears.........	66.6	74.0	74.0	74.0
Reimbursements-Superfund				
Obligations.............	$ 6,787.0	$ 30,000.0	$ 29,815.0	$ 30,000.0
Reimbursements-R&D				
Obligations.............	$ 3,444.3	$ 5,000.0	$ 5,000.0	$ 5,000.0
Reimbursements-AC&C				
Obligations.............	$ 0.0	$ 0.0	$ 0.0	$ 5,000.0
TOTAL, EPA				
Budget Authority........	$5,155,125.7	$5,605,505.1	$5,532,463.0	$5,580,709.0
Obligations.............	5,881,009.1	6,052,106.2	6,006,228.4	5,756,579.2
Outlays.................	4,979,818.0	5,594,965.0	5,581,438.0	6,002,537.0
Permanent Workyears.....	13,818.0	15,332.3	15,332.7	16,761.0
Total Workyears.........	14,436.6	15,833.3	15,842.3	16,761.0

Summary of Budget Authority,
Obligations, Outlays, and Workyears
By Media
(dollars in thousands)

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Air				
Budget Authority........	$ 268,368.5	$ 294,000.9	$ 288,924.8	$ 389,791.0
Obligations.............	267,314.6	291,008.6	288,796.0	388,384.0
Outlays.................	268,535.0	290,932.9	289,614.3	385,203.0
Permanent Workyears.....	1,598.9	1,756.9	1,704.3	1,984.6
Total Workyears.........	1,680.4	1,756.9	1,739.4	1,984.6
Water Quality				
Budget Authority........	$ 289,822.2	$ 350,292.2	$ 345,339.5	$ 379,096.5
Obligations.............	285,340.7	355,063.1	350,177.0	378,871.0
Outlays.................	270,382.5	334,643.9	333,127.9	358,749.0
Permanent Workyears.....	2,010.7	2,283.0	2,125.0	2,311.8
Total Workyears.........	2,142.8	2,284.0	2,215.9	2,311.8
Drinking Water				
Budget Authority........	$ 108,264.3	$ 122,399.3	$ 120,796.3	$ 132,637.3
Obligations.............	106,809.6	122,356.1	121,059.0	132,592.0
Outlays.................	111,414.4	124,177.3	123,615.1	133,914.3
Permanent Workyears.....	673.8	766.7	743.9	810.2
Total Workyears.........	716.0	766.7	768.0	810.2
Hazardous Waste				
Budget Authority........	$ 267,576.6	$ 273,787.5	$ 269,296.0	$ 317,144.1
Obligations.............	262,638.4	277,264.3	273,315.0	316,795.0
Outlays.................	253,744.5	264,578.8	263,380.1	307,477.6
Permanent Workyears.....	1,372.2	1,523.0	1,432.9	1,634.7
Total Workyears.........	1,452.3	1,523.0	1,490.1	1,634.7
Pesticides				
Budget Authority........	$ 118,862.1	$ 106,932.2	$ 104,765.7	$ 110,072.7
Obligations.............	117,961.3	106,341.2	104,303.0	110,118.0
Outlays.................	87,286.2	94,978.6	94,548.0	99,856.8
Permanent Workyears.....	795.7	853.3	857.3	1,091.7
Total Workyears.........	845.3	853.3	890.9	1,091.7

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Radiation				
Budget Authority........	$ 24,626.9	$ 35,862.8	$ 35,071.5	$ 39,109.7
Obligations.............	24,744.1	35,528.6	34,849.0	38,602.0
Outlays.................	22,383.1	31,472.9	31,330.5	35,040.9
Permanent Workyears.....	184.1	220.2	214.2	240.8
Total Workyears.........	194.0	220.2	216.8	240.8
Noise				
Budget Authority........	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Obligations.............	0.0	0.0	0.0	0.0
Outlays.................	12.2	0.0	0.0	0.0
Multimedia				
Budget Authority........	$ 80,339.0	$ 123,625.4	$ 126,861.2	$ 166,419.4
Obligations.............	79,864.2	122,883.2	122,626.0	166,069.0
Outlays.................	66,049.9	115,606.1	115,082.1	153,027.4
Permanent Workyears.....	597.7	773.0	721.1	841.5
Total Workyears.........	640.9	773.0	742.3	841.5
Toxic Substances				
Budget Authority........	$ 144,578.0	$ 158,368.6	$ 155,862.8	$ 113,439.0
Obligations.............	143,120.0	157,537.5	155,212.0	114,439.0
Outlays.................	143,200.2	140,097.6	139,462.9	104,527.4
Permanent Workyears.....	815.9	906.6	865.4	886.2
Total Workyears.........	862.0	906.6	876.1	886.2
Energy				
Budget Authority........	$ 54,735.7	$ 33,480.8	$ 32,171.9	$ 14,256.7
Obligations.............	54,478.9	33,555.0	32,822.0	14,730.0
Outlays.................	57,314.6	45,735.0	45,527.6	28,502.8
Permanent Workyears.....	62.8	52.4	51.8	30.4
Total Workyears.........	67.2	52.4	51.8	30.4
Management and Support				
Budget Authority........	$ 380,152.4	$ 423,427.7	$ 418,029.3	$ 477,061.2
Obligations.............	374,215.1	429,639.5	422,916.6	477,307.2
Outlays.................	359,827.4	396,256.0	394,460.5	456,922.8
Permanent Workyears.....	2,700.3	2,996.9	2,943.6	3,209.2
Total Workyears.........	2,894.3	2,996.9	3,050.7	3,209.2

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Buildings and Facilities				
Budget Authority........	$ 8,000.0	$ 14,768.0	$ 14,652.0	$ 13,000.0
Obligations.............	6,592.7	24,543.6	24,723.0	13,000.0
Outlays.................	15,118.0	19,543.0	19,[illegible].0	12,942.0
Hazardous Substance Superfund				
Budget Authority........	$1,410,000.0	$1,560,745.0	$1,540,286.0	$1,753,106.4
Obligations.............	1,543,719.5	1,608,194.3	1,588,379.8	1,753,107.0
Outlays.................	958,195.0	1,334,907.0	1,330,631.0	1,530,711.0
Permanent Workyears.....	2,621.5	3,035.0	3,413.5	3,552.0
Total Workyears.........	2,799.4	3,535.0	3,535.0	3,552.0
LUST Trust Fund				
Budget Authority........	$ 50,000.0	$ 74,822.0	$ 74,097.0	$ 75,575.0
Obligations.............	50,875.4	78,279.6	77,555.0	75,575.0
Outlays.................	32,859.0	35,707.0	35,489.0	49,645.0
Permanent Workyears.....	77.7	91.3	85.7	93.8
Total Workyears.........	82.4	91.3	91.3	93.9
Construction Grants				
Budget Authority........	$1,950,000.0	$2,018,225.0	$1,991,720.0	$1,600,000.0
Obligations.............	2,531,237.0	2,305,233.0	2,305,233.0	1,697,930.0
Outlays.................	2,349,827.0	2,363,092.0	2,362,668.0	2,338,857.0
Operations, Research and Facilities				
Obligations.............	$ 0.0	$ 50.0	$ 50.0	$ 50.0
Outlays.................	0.0	250.0	250.0	250.0
Tolerances Revolving Fund				
Obligations.............	$ 806.7	$ 1,000.0	$ 1,000.0	$ 1,000.0
Outlays.................	(293.0)	(200.0)	(200.0)	(200.0)
Misc. Contrib. Funds				
Obligations.............	$ 4.3	$ 10.0	$ 10.0	$ 10.0
Outlays.................	2.0	10.0	10.0	10.0

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991
Reregistration & Expedited Processing Revolving Fund				
Obligations............	$ 5,303.6	$ 33,851.0	$ 33,851.0	$ 18,000.0
Outlays................	(16,040.0)	(11,000.0)	(11,000.0)	7,100.0
Reimbursements - S&E				
Obligations............	$ 15,751.7	$ 20,000.0	$ 19,947.0	$ 20,000.0
Permanent Workyears.....	64.9	74.0 **	74.0 **	74.0 **
Total Workyears.........	66.6	74.0 **	74.0 **	74.0 **
Reimbursements-Superfund				
Obligations............	$ 6,787.0	$ 30,000.0	$ 29,815.0	$ 30,000.0
Reimbursements-R&D				
Obligations............	$ 3,444.3	$ 5,000.0	$ 5,000.0	$ 5,000.0
Reimbursements-AC&C				
Obligations............	$ 0.0	$ 0.0	$ 0.0	$ 5,000.0
TOTAL, EPA				
Budget Authority........	$5,155,125.7	$5,605,505.0 *	$5,532,463.0 *	$5,580,709.0
Obligations............	5,881,009.1	6,052,106.2 *	6,006,228.4 *	5,756,579.2
Outlays................	4,979,818.0	5,594,965.0 *	5,581,438.0 *	6,002,537.0
Permanent Workyears.....	13,576.2	15,332.3	15,332.7	16,761.0
Total Workyears.........	14,443.6	15,833.3	15,842.3	16,761.0

* Enacted 1990 BA and Obligation totals include $14,767.6 in undistributed funds. 1990 Current Estimate BA and Obligation totals include $14,589.0 in undistributed funds Enacted 1990 Outlays include $14,176.9/1990 Current Estimate outlays include $14,005.0 in undistrubuted funds.

** Includes 12 FTE for Ocean Dumping (10 in Water Quality and 2 in Multimedia).

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	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Salaries & Expenses	$89,690.1	$93,273.1	$92,635.8	$121,175.5	$28,539.7
Abatement Control and Compliance	$135,430.4	$146,552.0	$144,652.4	$204,196.7	$59,544.3
Research & Development	$42,194.1	$54,175.8	$51,636.6	$64,418.8	$12,782.2
TOTAL, Air	$267,314.6	$294,000.9	$288,924.8	$389,791.0	$100,866.2
PERMANENT WORKYEARS	1,598.9	1,756.9	1,704.3	1,984.6	280.3
TOTAL WORKYEARS	1,680.4	1,756.9	1,739.4	1,984.6	245.2
OUTLAYS	$268,535.0	$290,932.9	$289,614.3	$385,203.0	$95,588.7
AUTHORIZATION LEVELS	Reauthorization for the Clean Air Act expired September 30, 1981. Reauthorization is pending.				

AIR

OVERVIEW AND STRATEGY

The Clean Air Act authorizes a nationwide program of air quality planning, regulation, enforcement, and research to control air pollution. A revised Clean Air Act will be passed during 1990. This budget request is based on the amendments sent to Congress by President Bush in July 1989. In 1991 EPA will focus on development of the regulations, guidelines, and support infrastructure needed to implement the expected new legislation and achieve six major goals: (1) achieve National Ambient Air Quality Standards (NAAQSs) to protect public health; (2) implement an acid deposition control program; (3) address the growing problems of global change and indoor air pollution; (4) reduce the risk of exposure to air toxics; (5) increase the capacity and improve the effectiveness of state and local air quality agencies; and (6) conduct research to provide a strong scientific and technical basis for regulatory programs. In its efforts to achieve these goals, EPA will place increased emphasis on pollution prevention activities.

Achieve NAAQSs Nationwide

Establishing NAAQSs at levels that protect public health and prevent other adverse effects has been the keystone of the national air quality program. The NAAQSs are revised based on the results of regular assessments of the most current scientific data on health and other effects of various air pollutants. In 1991 EPA plans to promulgate revised or reaffirmed NAAQSs for sulfur dioxide and propose revised or reaffirmed NAAQSs for lead and ozone.

To achieve NAAQSs, EPA helps states complete and enforce State Implementation Plans (SIPs) as required by the Clean Air Act. Although air quality has generally improved as a result of SIP measures, many SIPs have proven inadequate for meeting NAAQSs by statutory deadlines. Expected revisions to the Clean Air Act will address this problem.

The NAAQSs for ozone and carbon monoxide have proven to be the most difficult standards to meet. Currently, over 135 million people live in areas that failed to meet the standards. As a result, EPA has asked the states to revise their SIPs in 97 areas that failed to meet the ozone NAAQS and in 54 areas that failed to meet the carbon monoxide NAAQS. In 1991 EPA will provide guidance and regulations needed to attain the NAAQSs by the target dates specified in the expected revised Clean Air Act. EPA will continue to focus on ensuring compliance with SIP calls issued in May 1988 and November 1989. EPA and state and local agencies will require significant resources to implement expanded Clean Air Act requirements.

EPA will continue to develop control techniques guidelines (CTGs) for new source categories of volatile organic compounds (VOCs), which are ozone precursors. EPA will assess the need for additional federal control measures. EPA and the states will continue to carry out a comprehensive enforcement program aimed at achieving continuous compliance by stationary sources, primarily those emitting VOCs.

Another element of the strategy for attaining ozone and carbon monoxide NAAQSs provides for continued reduction in emissions from in-use motor vehicles. A substantial amount of the additional ozone precursor reduction required by the expected revisions to the Clean Air Act will come from continued enforcement of existing and new mobile source standards and through the use of clean fuels. To ensure that vehicles meet emission standards throughout their useful life, EPA will continue to maintain a comprehensive Federal compliance program. The program includes preproduction certification of emission control systems; selective enforcement audits at manufacturers' facilities; and recalls of insufficiently controlled vehicles. The Agency will continue to work with states to establish and maintain effective vehicle inspection/maintenance and anti-tampering programs.

In 1991 EPA will begin to implement expected revisions to the Clean Air Act for mobile sources. EPA will continue to develop new light-duty and heavy-duty vehicle emissions standards and begin to evaluate alternative clean fuels such as oxygenated blends and compressed natural gas. The Agency will also assess the effectiveness of clean technologies to reduce emissions of carbon monoxide under cold temperature conditions.

EPA will continue to help states develop SIPs for attaining the revised NAAQSs for PM-10 and will review SIPs submitted by states as required under the Clean Air Act. Approximately 170 areas will not meet, or have the potential for not meeting, the revised PM-10 standards. Expected revisions to the Clean Air Act will establish new attainment dates for PM-10. In 1991 the PM-10 program will focus on developing and reviewing SIPs, especially for newly identified nonattainment areas. EPA will develop mitigation strategies for problems contributing to long-term PM-10 nonattainment, including measures to control woodstoves and other nontraditional sources. EPA will continue to develop Federal Implementation Plans (FIPs) consistent with requirements of litigation and new legislation.

Implement an Acid Deposition Control Program

In 1991 EPA will begin to implement expected revisions to the Clean Air Act that establish new requirements for control of acid deposition. The proposed revisions require reductions of 10 million tons of sulfur dioxide and 2 million tons of nitrogen oxides. Five million tons of reduction are to occur by the end of 1995 (Phase I). The proposal also establishes a system of emission allowances and marketable permits to allow maximum flexibility for utilities to achieve required reductions in the most efficient and least costly manner.

In 1991 EPA will focus on development of guidance and regulations needed to implement the proposed new requirements. These include developing regulations governing: the issuance, trading and banking of allowances; continuous monitoring of emissions; participation of industrial sources in the allowance system; and Federally-issued Phase I permits. EPA will also develop an emissions/allowance tracking system to facilitate free and open trading.

EPA will continue to provide advice and assistance to the Department of Energy's Clean Coal Technology Program and develop energy conservation measures to reduce and control acid deposition pollutants.

Address Growing Problems: Global Change and Indoor Air Quality

Global Change. The Clean Air Act gives the Administrator of EPA authority to protect the stratosphere. EPA will continue its role in Federal efforts aimed at confronting ozone depletion, climate change related to stratospheric alterations, and other effects and emissions caused by stratospheric change. Under the Montreal Protocol on Substances that Deplete the Ozone Layer, currently signed by the United States and 46 other nations, EPA will implement and enforce domestic rules, support international implementation of rules and policies under the Protocol, carry out risk and economic assessments to monitor progress under the Protocol, and share information on technology development and alternative chemicals to curtail ozone depletion and minimize global warming trends. In 1991 EPA will develop rules on trade with non-participating nations. EPA will develop methods for inspection of imported goods and transfer of non-CFC using technologies to lesser developed countries. EPA will also emphasize administration of ozone depleting chemical allocations.

Indoor Air Quality. Research completed by EPA and others indicates that health risks are caused by total exposure to air pollutants and not just from ambient exposures. Elevated levels of certain indoor air pollutants may pose a substantial threat to human health. In 1991 EPA will continue to provide policy direction to the indoor air quality research program; will disseminate information to broad segments of the public on risks and ways to mitigate indoor air quality problems; and will coordinate its activities with other EPA programs, other Federal agencies, states, and the private sector. In 1991 EPA will further examine the extent of the "sick building syndrome," will initiate the establishment of an Indoor Air Quality Technical and Non-Technical Clearinghouse, issue manuals on building investigations, issue a physicians handbook, and complete indoor air quality training programs for state and local government officials.

Reduce Risk of Exposure to Air Toxics

In 1991 EPA will begin to implement expected revisions to the Clean Air Act to reduce the risk of exposure to air toxics by regulating source categories. The Agency estimates that 2.7 billion pounds of toxic chemicals are emitted into the air each year and that these emissions contribute to a substantial number of fatal cancers annually. Work will concentrate on development of a list of major source categories of 191 pollutants and initiation of work on developing maximum achievable control technology (MACT) for ten source categories to meet the two-year requirement of the proposed new legislation.

In 1991 EPA will develop regulations for emissions from treatment, storage and disposal facilities. EPA will continue its efforts to control motor vehicle emissions and fuels which are major components of toxic air pollutants. The Agency will help states develop and enhance multi-year development plans and will provide assistance in evaluating and regulating high risk point sources and multi-pollutant urban toxics problems.

Strengthen State and Local Programs

In 1991 EPA will devote substantial effort toward increasing the capacity of state and local air pollution control agencies and leveraging the effects of its own resources. EPA will provide states with guidance and regulations needed to implement expected new requirements for operating permits. These will include model permits, standard application forms, fee recovery requirements, and monitoring/reporting requirements.

The Agency will continue to support state and local air pollution control programs by providing direct program assistance and training and by facilitating information exchange. EPA will share information through the Control Technology Center and clearinghouses that provide information on air toxics, emission factors, control technology, and risk. EPA will also assist states with model application, data base development, and model documentation to support ozone, carbon monoxide, and PM-10 SIP analyses and attainment demonstrations.

Conduct Research to Provide a Strong Scientific and Technical Basis for Regulatory Programs

EPA's air quality research and development program provides the scientific and engineering basis for sound regulatory decision-making. The Office of Research and Development (ORD) provides health and ecological effects data, monitoring methods and support, pollutant transport models, assessment of emission reduction technologies, and quality assurance to help meet the Agency's public information needs.

In 1991 EPA is expanding its research on the causes and transport of ozone, particularly with respect to the role of biogenic emissions and other factors that may influence ozone formation. The regional oxidant model (ROM) will be extended from the Northeast to apply to the Southeast.

Other areas of research emphasis in 1991 include global climate change, indoor air quality, clean fuels, and acid aerosols. In addition, ORD will undertake an enhanced emissions inventory program for air toxics which will compile available data on a national basis and provide improved emissions information to policy-makers.

Pollution Prevention Initiatives

In 1991 the air program will undertake or participate in seven projects designed to prevent pollution. These include: working with states to encourage utility planning with consideration of energy efficiency and conservation; defining health and environmental risks associated with alternative consumer products; examining options to limit production and use of lead and encourage recycling of lead acid batteries; improving emerging VOC control methods for area and small sources; promoting and institutionalizing pollution prevention in air permit programs; evaluating methods to address industrial pollution prevention through regulation and outreach; and promoting pollution prevention requirements in enforcement settlements. EPA will also incorporate pollution prevention in its regulations when appropriate.

Consulting Services

The Office of Air and Radiation will fund a limited amount of consulting services in 1991. Section 117 of the Clean Air Act requires consultation with appropriate advisory committees prior to publishing any NSPS or NESHAP. The National Air Pollution Control Techniques Advisory Committee is comprised of members from industry, environmental groups, academia, and state/local governments. The committee typically meets three or four times per year to review the technical basis of Federal emission standards.

A few small management service contracts will be awarded in 1991. The purpose of these contracts will be to provide specialized expertise in environmental economics needed to assess the economic impacts and benefits of various NSPS, NESHAP, and NAAQS regulatory actions. The assessment of economic impacts and benefits is required by Executive Order 12291.

AIR

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE (+) DECREASE (-) 1991 VS 1990
National Ambient Air Quality Standards				
Number of Pollutants Covered (Cumulative) .	6	6	6	--
Proposals*	1	0	2	+2
Promulgations*	0	0	1	+1
New Source Performance Standards				
Source Categories Covered (Cumulative) .	59	66	68	+2
Proposals**	0	3	0	-3
Promulgations	3	7	1	-6
National Emission Standards for Hazardous Air Pollutants				
Number of Source Categories Covered (Cumulative) .	31	37	37	--
Number of Pollutants Covered (Cumulative) .	6	7	7	--
Proposals**	4	4	6	+2
Promulgations	5	7	0	-7
Enforcement Actions - Stationary Sources				
Inspections	2,445	1,868	1,868	--
Notices of Violation . .	296	300	300	--
Administrative Orders . .	262	225	225	--
Civil Litigation	103	86	86	--
Criminal Litigation . . .	6	10	10	--
Enforcement Actions - Mobile Sources				
State and Local Tampering/ Fuel Switching Programs (Cumulative)	45	45	45	--
Assembly Line Testing Test Orders	21	19	19	--
Recall Investigations . .	27	25	25	--
Notices of Violation Tampering/Fuel Switching	417	520	615	+95

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* Revisions or reaffirmations

** New source categories and revisions. NESHAPs include air toxic standards developed under other regulatory authorities

NOTE: All outputs are incremental except as indicated.

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AIR
Air Research

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Scientific Assessment - Air						
Salaries & Expenses		$3,079.6	$2,948.7	$2,929.0	$3,531.1	$602.1
Research & Development		$2,173.0	$2,182.6	$2,324.2	$3,552.5	$1,228.3
	TOTAL	$5,252.6	$5,131.3	$5,253.2	$7,083.6	$1,830.4
Monitoring Systems And Quality Assurance - Air						
Salaries & Expenses		$6,290.6	$6,246.1	$6,049.2	$6,466.7	$417.5
Research & Development		$6,322.3	$6,246.7	$5,852.9	$7,707.0	$1,854.1
	TOTAL	$12,612.9	$12,492.8	$11,902.1	$14,173.7	$2,271.6
Health Effects - Air						
Salaries & Expenses		$7,422.4	$6,688.6	$6,544.1	$7,193.0	$648.9
Research & Development		$13,424.5	$18,089.0	$16,475.3	$14,624.5	-$1,850.8
	TOTAL	$20,846.9	$24,777.6	$23,019.4	$21,817.5	-$1,201.9
Environmental Engineering And Technology - Air						
Salaries & Expenses		$3,376.5	$3,965.6	$3,669.5	$4,180.3	$510.8
Research & Development		$3,035.2	$5,023.6	$4,919.6	$5,802.2	$882.6
	TOTAL	$6,411.7	$8,989.2	$8,589.1	$9,982.5	$1,393.4
Environmental Processes And Effects - Air						
Salaries & Expenses		$745.7	$938.4	$925.9	$1,253.0	$327.1
Research & Development		$1,277.1	$1,280.9	$1,246.8	$1,633.3	$386.5
	TOTAL	$2,022.8	$2,219.3	$2,172.7	$2,886.3	$713.6
Characterization, Transport And Fate - Air						
Salaries & Expenses		$3,733.1	$3,655.9	$3,535.3	$3,962.1	$426.8
Research & Development		$7,269.9	$8,203.5	$7,930.4	$9,021.8	$1,091.4
	TOTAL	$11,003.0	$11,859.4	$11,465.7	$12,983.9	$1,518.2
Stratospheric Modification Program - Air						
Salaries & Expenses		$895.9	$2,021.7	$2,518.6	$3,922.5	$1,403.9
Research & Development		$8,692.1	$13,149.5	$12,887.4	$22,077.5	$9,190.1
	TOTAL	$9,588.0	$15,171.2	$15,406.0	$26,000.0	$10,594.0
TOTAL:						
Salaries & Expenses		$25,543.8	$26,465.0	$26,171.6	$30,508.7	$4,337.1
Research & Development		$42,194.1	$54,175.8	$51,636.6	$64,418.8	$12,782.2
Air Research	TOTAL	$67,737.9	$80,640.8	$77,808.2	$94,927.5	$17,119.3

AIR
Air Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PERMANENT WORKYEARS					
Scientific Assessment - Air	46.1	49.1	49.1	53.4	4.3
Monitoring Systems And Quality Assurance - Air	107.9	102.0	100.5	101.5	1.0
Health Effects - Air	99.1	115.0	114.0	113.0	-1.0
Environmental Engineering And Technology - Air	56.5	57.5	56.4	58.4	2.0
Environmental Processes And Effects - Air	13.2	13.8	13.8	13.8	0.0
Characterization, Transport And Fate - Air	54.6	56.5	55.0	57.0	2.0
Stratospheric Modification Program - Air	13.2	30.9	30.9	42.9	12.0
TOTAL PERMANENT WORKYEARS	390.6	424.8	419.7	440.0	20.3
TOTAL WORKYEARS					
Scientific Assessment - Air	47.9	49.1	49.1	53.4	4.3
Monitoring Systems And Quality Assurance - Air	109.0	102.0	100.5	101.5	1.0
Health Effects - Air	111.7	115.0	114.0	113.0	-1.0
Environmental Engineering And Technology - Air	56.9	57.5	56.4	58.4	2.0
Environmental Processes And Effects - Air	14.3	13.8	13.8	13.8	0.0
Characterization, Transport And Fate - Air	54.7	56.5	55.0	57.0	2.0
Stratospheric Modification Program - Air	13.2	30.9	30.9	42.9	12.0
TOTAL WORKYEARS	407.7	424.8	419.7	440.0	20.3

AIR

Air Quality Research

Principal Outputs by Objective

Objective 1: Provide Scientific Support to Develop and Review Primary and Secondary National Ambient Air Quality Standards (NAAQS).

1991: o External Review Draft (ERD) of the nitrogen oxides Air Quality Criteria Document (AQCD) for CASAC review (Scientific Assessment).

o Assessment of the pulmonary health effects of inhaled acid aerosols in animals (Health).

o Procurement in Improved Methods for Measuring Ambient Aerosols (Monitoring).

1990: o Prepared External Review Drafts (ERD) for the nitrogen oxides and carbon monoxide Air Quality Criteria Documents (AQCD) (Scientific Assessment).

o Report on aerosol sources for the Eastern U.S. (Characterization).

o Report on response of the human respiratory tract to acute exposure to acid aerosols (Health).

o Report on Analysis of Eastern US Visibility Data (Monitoring).

1989: o Completed supplement to the AQCD for ozone and other photochemical oxidants (Scientific Assessment).

o Report on the effects of prolonged exposure (greater than six hours) to ozone at or below current one-hour NAAQS (Health).

o Publication of a comprehensive research plan to determine the effects of tropospheric ozone on U.S. forests (Environmental Processes).

Objective 2: Provide Scientific Support to Develop New Source Performance Standards (NSPS) and State Implementation Plans (SIPs).

1991: o A assessment report on the role of consumer/commercial solvents in ozone non-attainment, including emissions reductions approaches for highest volume sources (Engineering).

o Joint Symposium on Stationary Combustion NOx Control (Engineering).

o Summary report on control strategy application of Regional Oxidant Model for the Regional Oxidant Modeling Northeast Transport (ROMNET) program (Monitoring).

1990: o Report on the application of conventional particulate control technology in major areas of concern (Engineering).

o Evaluation of the Regional Oxidant Model (ROM) using analytical test data and new air quality data (Characterization).

o Report on area volatile organic compound (VOC) sources and control options to support the Agency's post-1987 ozone non-attainment strategy (Engineering).

1989: o Report on the development of an advanced process which utilizes calcium silicate sorbents (ADVACATE) to control acid gases from combustion sources (Engineering).

o Report on recommended modifications to the Complex Terrain Dispersion Model (Characterization).

Objective 3: Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants (HAPs).

1991: o External Review Draft (ERD) on the diesel risk assessment (Scientific Assessment).

o Development of a physiologically based-pharmacokinetic model for predicting dosimetry of volatile organic compounds in humans (Health).

o Report on development of a secondary combustion woodstove for reducing particulate emissions to or below the 1990 NSPS (Engineering).

o Article on source apportionment of mutagenic activity in fine particle organics identified in Boise, Idaho field study (Monitoring).

1990: o Report on retrofit technology for existing woodstoves (Engineering).

o Report on Boise field study of woodstove emissions (Engineering).

o Assessment of the contribution of wood burning and automobile emissions to the mutagenicity and carcinogenicity of airborne pollutants (Health).

1989: o Assessment of the comparative mutagenicity and carcinogenicity of combustion source emissions (Health).

o Report on identities of HAPs produced in the atmosphere from ubiquitous innocuous pollutants (Characterization).

Objective 4: Provide Scientific Support for the Mobile Source Regulatory Program.

1991: o Studies on the DNA adduct dosimetry of the particulate organic emissions from mobile sources (Health).

1990: o Journal article characterizing tailpipe, evaporative, and refueling emissions from gasoline fueled automobiles (Characterization).

o Assessment of the contribution of mobile source emissions to the genotoxicity of ambient urban aerosol mixtures (Health).

1989: o Report on population exposure to mobile source pollutants for 1988 (Monitoring).

o Journal article evaluating emissions from diesels equipped with advanced emission control technology (Characterization).

o Report on the effects of atmospheric transformation on the mutagenicity of gaseous gasoline emissions (Health).

Objective 5: Provide Scientific Data on the Sources, Exposures, and Health Effects Associated with Indoor Air Pollutants and Evaluate Control Strategies.

1991: o Model indoor air risk assessment (Scientific Assessment).

o Report on the effects from inhalation of chemical mixtures found in indoor environments (Health).

o Research report on biocontaminant control by humidity control systems, air cleaners, and biocides (Engineering).

o Report on indoor air pollutant "sinks" (Engineering).

1990: o Report assessing the potential carcinogenicity of combustion emissions from unvented indoor kerosene heaters (Health).

o Research report on low emission materials and products (Engineering).

o Research report on kerosene heater emissions (Engineering)

1989: o Report on human clinical studies assessing the effects of exposure to volatile organic compounds found indoors (Health).

o Develop personal computer model for evaluating indoor air quality control options (Engineering).

o Report on the Effectiveness of Air Cleaners for IAQ Control (Engineering).

Objective 6: Provide Scientific Data to Determine the Effects of Stratospheric Ozone Depletion and Evaluate Control Strategies

1991: o Preliminary results of work on the effects of UV-B radiation on human immunosuppression (Health).

- o Report on status of alternatives to halons as fire extinguishants (Engineering).

- o Status report on alternatives for insulation which do not use CFC's (Engineering).

- o Establish data base for N_2O emissions from a variety of stationary combustion sources including the potential for plume formation (Engineering).

- o Report on selected UV-B effects on wetland rice ecosystems (Stratospheric Modification).

1990: o Report on the effects of UV-B radiation on rice yield (Stratospheric Modification).

- o Development of a predictive UV-B dose response model for commercially important fish (Stratospheric Modification).

- o Report on status of alternative refrigerants for home refrigerators (Engineering).

1989: o Biennial Congressional Report on ozone depletion which is required by the Clean Air Act (Stratospheric Modification).

- o Report on the most important fisheries resources likely to be affected by UV-B radiation, both in terms of resource significance and sensitivity (Stratospheric Modification).

- o Development of a prioritized list of research projects to evaluate the health effects associated with UV-B radiation (Health).

- o Engineering evaluations of controls and technical support for international negotiations on stratospheric ozone modification (Engineering).

Objective 7: Provide Scientific Data to Determine the Effects of Global Warming and Evaluate Control Strategies

1991: o Report of development of improved emission factors for methane for selected anthropogenic sources (Engineering).

- o Report on the sensitivity of forest regions, worldwide, to global change (Stratospheric Modification).

- o Report on processes that control emissions of radiatively important trace gases from biosphere (Stratospheric Modification).

- o Report on practical and beneficial techniques for mitigation of trace gases emissions (Stratospheric Modification).

1990: o Report on estimation of the relative importance of major forest types as sources and sink for radiatively important trace gases

(Stratospheric Modification).

- o Evaluate feedbacks from ecosystem and land-use changes, including changes in tropical forests, to changes in climate (Stratospheric Modification).

- o Report on soil microbial processes relating radiatively important trace gas fluxes and water balance (Stratospheric Modification).

- o Report targeting opportunities for mitigation research (Engineering).

1989: o Interim Assessment of the response of terrestrial ecosystems to changing climactic conditions, with the first estimates of landscape sensitivity (Stratospheric Modification).

- o Evaluation of air quality changes due to changes in tropospheric chemical reactions sensitive to climate change (Stratospheric Modification).

- o Emissions Chapter for ORD Global Climate Change Research Prospectus (Stratospheric Modification).

Objective 8: Provide Scientific Data and Support to the National Health and Nutrition Examination Survey (NHANES-III)

Health Effects Institute

1991: o Status report on NHANES-III cooperative research (Health).

1990: o Status report on NHANES-III cooperative research and evaluation of field and laboratory test protocol for spirometry (Health).

1989: o Status report on NHANES-III cooperative research (Health).

AIR

Air Quality Research

Budget Request

The Agency requests a total of $94,927,500 supported by 440.0 total workyears for 1991 an increase of $17,119,300 and 20.3 total workyears from 1990. Of the request, $30,508,700 will be for the Salaries and Expenses appropriation and $64,418,800 will be for the Research and Development appropriation, increases of $4,337,100 and $12,782,200, respectively.

Program Objectives

This research program provides the research and technical support necessary to enable the Agency to carry out its regulatory and information transfer responsibilities under the Clean Air Act. The following objectives support these efforts:

Objective 1. Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. This research program provides the scientific data needed to issue and revise national ambient air quality standards for emissions of criteria air pollutants.

Objective 2. Provide Scientific Support to Develop NSPS and SIPs. This research supports issuance and revision of New Source Performance Standards and State Implementation Plans through development of models and monitoring techniques for air pollutants and engineering studies of control technologies.

Objective 3. Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants (HAPs). Under this objective EPA conducts research to identify and control emissions of air pollutants from a variety of sources that are hazardous to human health but are not already regulated as criteria air pollutants.

Objective 4. Provide Scientific Support for the Mobile Source Regulatory Program. This research evaluates emissions, exposure patterns, and health effects of mobile source pollutants.

Objective 5. Provide Scientific Data Necessary to Determine Sources, Exposures, Health Effects, and Control Strategies Associated with Indoor Pollutants. Research conducted under this objective supports the Agency's efforts to inform the public about hazards associated with indoor air pollutants and to develop methods to control air emissions from major household sources.

Objective 6. Provide Scientific Data Necessary to Determine the Effects of Stratospheric Ozone Depletion and Develop Control Strategies. This research program is primarily concerned with providing necessary data on the effects of stratospheric ozone depletion and resulting increases in harmful (UV-B) radiation on humans, plants, and ecosystems. Research will also evaluate the environmental consequences of alternative compounds of CFCs and halons, and technologies to replace those currently used for refrigeration, insulation, and fire extinguishment.

Objective 7. Provide Scientific Data Necessary to Determine the Effects of Global Warming and Develop Control Strategies. This objective addresses the research needed to determine the impact of global climate change, to help understand the regional consequences of global climate trends, and to develop and test predictive source and sink models for important trace gases. Research will develop and evaluate technologies and mitigation options for greenhouse gases that produce global warming.

Objective 8. Provide Scientific Support to the National Health and Nutrition Examination Survey (NHANES-III). Activities in support of this objective will provide national baseline data on exposure to pollutants, body burdens, and health effects.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $7,083,600 supported by 53.4 total workyears for this program, of which $3,531,100 will be for the Salaries and Expenses appropriation and $3,552,500 will be for the Research and Development appropriation. This represents an increase of $602,100 in the Salaries and Expenses appropriation and an increase of $1,228,300 in the Research and Development appropriation and 4.3 total workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for assessing risks from air pollutants. The increase in the Research and Development appropriation will support the development of risk assessments required by the Clean Air Act Amendments.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. The research program office will review recent health studies and other new scientific data for several air pollutants to support the Agency's statutory mandate to revise National Ambient Air Quality Standards (NAAQS) every five years. This data will be evaluated in Air Quality Criteria Documents (AQCD) which are the primary source of information used by EPA regulatory decisionmakers in establishing or revising NAAQS. This will include an External Review Draft (ERD) of the nitrogen oxides AQCD for Clean Air Science Advisory Committee (CASAC) review. In 1991, the research office will update databases on particulate matter (PM) related research and will continue evaluating data on the health effects of acid aerosols.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. To provide the Office of Air and Radiation (OAR) with the information needed to make regulatory decisions on specific hazardous air pollutants. The research program office will complete final comprehensive Health Assessment Documents (HADs) for three chemicals and will prepare External Review Drafts (ERDS) for two to four chemicals. The research program will implement an External Review Draft (ERD) on the diesel risk assessment. They will also complete Tier 1 screening documents, the initial review of pertinent health effects data on potential HAPs, for one to three chemicals. Other activities will include enhanced support for: assessments of health data for potential HAPs by source category (SCHADS); technical assistance to Regions and States on air toxics issues through the Air Risk Information Support Center (Air RISC); and research on inhalation reference doses (RfDs) for air toxics.

Provide Scientific Data Necessary to Determine Sources, Exposures, Health Effect and Control Strategies Associated with Indoor Pollutants. In support of the Agency's Indoor Air Quality Implementation Plan, the research program office will continue risk assessments for multiple and non-cancer indoor air pollutants and health assessments of biocontaminants found indoors. The Agency will distribute these assessments, which are based on the results of laboratory studies and available literature, to other Federal agencies, State and local governments, and the general public.

1990 Program

In 1990, the Agency is allocating a total of $5,253,200 supported by 49.1 total workyears for this program, of which $2,929,000 is from the Salaries and Expenses appropriation and $2,324,200 is from the Research and Development appropriation.

The research program office will conduct research on NAAQS assessments including the revision of the AQCDs for nitrogen oxides, carbon monoxide, particulate matter (PM_{10}), and 1-hr ozone (O_3), and will continue to develop and evaluate databases on acid aerosols. This includes preparing External Review Drafts for the nitrogen oxides and carbon monoxide AQCDs. This research program will conduct air toxics research including technical assistance to Regions and States through the Air RISC, research on inhalation references doses, and assessments of health data for potential hazardous air pollutants (HAPs) by source category. Finally, the research program office will conduct indoor air health impact and risk assessments. These efforts will include the development of assessment methodology for multiple pollutants and non-cancer endpoints, assessments of biocontaminants, and simulation models.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,252,600 supported by 47.9 total workyears for this program, of which $3,079,600 was from the Salaries and Expenses appropriation and $2,173,000 was from the Research and Development appropriation.

The research program office worked on revising the AQCDs for carbon monoxide and nitrogen oxide and prepared an issue paper on the health effects of acid aerosols. ORD completed a supplement to the AQCD for ozone and other photochemical oxidants. The research program office completed six HADs, two ERDs, and six Tier 1 screening documents for HAPs identified for study by the Office of Air and Radiation (OAR). The completed assessments included those on ammonia, hydrogen fluoride, inorganic phosphorous, hospital waste incineration, and mercuric chloride. The research office also initiated several inhalation RfDs. In collaboration with OAR, the program developed and successfully operated the Air Risk Information Support Center (Air RISC). The Air RISC provides technical information to State and local governments on health risks associated with HAPs. Finally, as part of the Agency's implementation of its indoor air research program, the program greatly expanded the indoor air bibliographic data base and its accessibility to the public.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $14,173,700 supported by 101.5 total workyears for this program, of which $6,466,700 will be for the Salaries and Expenses appropriation and $7,707,000 will be for the Research and Development appropriation. This represents an increase of $417,500 in the Salaries and Expenses appropriation, an increase of $1,854,100 in the Research and Development appropriation, and increase of 1.0 total workyears. The increases represent efforts to develop measurement techniques to characterize ambient air levels of acid aerosols, the development of area source methods, the development of indoor air monitoring methodology, and the development and application of remote sensing techniques.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. As State and local officials implement the particulate matter NAAQS, improved methods are needed to refine measurements of particulate matter in ambient air. Erroneous measurement techniques may lead to unnecessarily costly control strategies or, conversely, failure to address potential health hazards. In 1991, research will focus on evaluation of cost-effective methodologies for measuring inhalable particulate matter. This effort includes an evaluation of PM_{10} continuous monitors and development of an aerosol classifier for determining particle size distributions. The focus of this research program will be on measuring and monitoring ozone and acid aerosols. Based on the lack of an acceptable, low-cost aerosol measurement method, the Agency will also emphasize developing and improving methods for measuring human exposure to acid aerosols. Other acid aerosol research will include ambient characterization of acid aerosols and broader support of ongoing epidemiological studies. In response to the Clean Air Science Advisory Committee (CASAC) recommendations, the research program will study up to 6 urban areas for spatial distribution of acids, source-receptor relationships, seasonal patterns, local and synoptic meteorological influence, and the relationship of personal exposure to indoor and outdoor concentrations. Also, the research program will evaluate, improve, and standardize other ambient monitoring systems for criteria pollutants. The program office will provide quality assurance, analytical assistance, and data management support to program offices, other EPA laboratories, and international agencies.

Provide Scientific Support to Develop NSPS and SIPs. To ensure the accuracy and precision of data used for NSPS and SIPS regulatory and enforcement decisions, the program will develop source measurement methodologies and quality assurance techniques for a variety of pollutants with an emphasis on fine particles. Specifically, the program will conduct studies on real-dimensional data in real-time intervals obtained using Light Induced Detection and Ranging (LIDAR) techniques in order to help evaluate control strategies such as review effectiveness of State Implementation Plans (SIPs) and to ensure that the Agency keeps abreast with the significant advances in remote sensing and attendant data integration. These techniques are being developed in order to help Regions in non-attainment for such pollutants as ozone and particulate matter. The National Space and Aeronautics Administration (NASA) provides some of the funding for this research. These techniques are faster than fixed site monitoring and will provide a quick way to make three dimensional comparisons of pollutants in an area. Also, the research program will develop source measurements and quality assurance techniques for a variety of pollutants with emphasis on inhalable and fine particles; provide quality assurance to other Agency components, States, and Regions; and, distribute certified reference materials to users. There will be a summary report on the control strategy applications of the Regional Oxidant Modeling Northeast Transport (ROMNET) program.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. Source emission monitoring is needed to set the National Emissions Standards for Hazardous Air Pollutants mandated by the Clean Air Act (CAA) and to determine compliance with these standards. This research program will focus on the completion of methodologies for existing NESHAPS. To improve the estimates of exposure to potential HAPs, the research program will conduct studies to develop, evaluate, and standardize monitoring systems for ambient air, and sources. The Integrated Air Cancer Project (IACP), a multidisciplinary research program to quantify exposure to airborne pollutants, will emphasize methods development for both indoor and outdoor detection of important HAPs. New air toxics methods will be developed for the implementation of the President's proposed Clean Air Act legislation. The research office will publish an article on source apportionment of mutagenic activity in fine particle organics identified in the Boise, Idaho field study.

Provide Scientific Support to the Mobile Source Regulatory Program. This research program will improve the data base on actual human exposure to mobile source pollutants. The program office will extend the carbon monoxide (CO) human exposure methodology to benzene and other volatile organic pollutants with an emphasis toward quantifying exposures resulting from the use of alternative fuels like methanol. The research office will develop, refine and field-test human activity pattern-exposure models. Also, statistical models which predict human exposures to pollutants while traveling in vehicles will be evaluated. All of these efforts will be coordinated to develop a realistic picture of actual exposure to mobile source pollutants.

Provide Scientific Data Necessary to Determine Sources, Exposures, Health Effects, and Control Strategies Associated with Indoor Pollutants. Based on the human exposure research needs identified by the Total Human Exposure Research Council and to support the Indoor Air Quality Implementation Plan, the focus of indoor air monitoring research will be on developing building diagnostic and measurement methods like study protocols, questionnaires, and instruments to be used for indoor air studies in complaint buildings and residences.

1990 Program

In 1990, the Agency is allocating a total of $11,902,100 supported by 100.5 total workyears for this program, of which $6,049,200 is from the Salaries and Expenses appropriation and $5,852,900 is from the Research and Development appropriation.

This research program will evaluate and improve: ambient and source monitoring systems; measurement methods to include in-depth evaluation of PM_{10} samplers; the development of methods for measuring acid aerosols; and remote monitoring techniques such as the airborne UV-DIAL system for measuring SO_2 and ozone. The Toxic Air Monitoring Stations (TAMS) program will conduct field evaluations for potential widespread application of methodologies for a variety of air toxic pollutants. This research will include a report on the analysis of Eastern U.S. visibility data. The Integrated Air Cancer Project (IACP) is analyzing the results from the air monitoring field study. The program office is also developing quality assurance procedures and materials for use in Agency monitoring programs and regulatory activities, and will conduct evaluations of the quality of monitoring data collected by Regions, States, and other outside sources. Indoor monitoring research is focused on developing air samplers, for use in quantifying indoor air exposures in important microenvironments, and on developing methodologies which identify sources contributing to "Sick Building" syndrome.

1989 Accomplishments

In 1989, the Agency obligated a total of $12,612,900 supported by 109 total workyears for this program, of which $6,290,600 was from the Salaries and Expenses appropriation and $6,322,300 was from the Research and Development appropriation.

A comprehensive workshop was conducted to identify the available measurement techniques to characterize ambient air levels of acid aerosols. Based on the results of the workshop, selected methods will be tested and evaluated under standard conditions in order to make improvements in the measurement techniques and to allow a comparison of acid aerosol data being obtained in several on-going epidemiological studies and future acid aerosol characterization studies. Also, several commercially available methods have been evaluated and approved as equivalent methods for measuring ambient levels of PM_{10}. A report was completed on population exposures to mobile source pollutants fo: 1988.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $21,817,500 supported by 113.0 total workyears for this program, of which $7,193,000 will be for the Salaries and Expenses appropriation and $14,624,500 will be for the Research and Development appropriation. This represents a increase of $648,900 in the Salaries and Expenses appropriation and a decrease of $1,850,800 in the Research and Development appropriation and a 1.0 decrease in total workyears. The decrease in Research and Development appropriation reflects a smaller investment than the prior year in equipment for the Chapel Hill, NC, inhalation facility. Also, the NHANES III resources were transferred to the multi-media budget subactivity.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. The NAAQS program will focus on ozone and acid aerosols. With confirmation of the existence of ozone health effects, this research will study acute, subchronic, and chronic exposure to criteria pollutants in response to the statutory mandate for periodic review of NAAQS and the research needs identified by the CASAC of the Agency's SAB. Research will emphasize species sensitivity issues and inflammatory and pulmonary function responses in man. This will include an assessment of the pulmonary health effects of inhaled acid aerosols in animals. Studies of exposure to criteria pollutants will shift from acute to chronic effects and will emphasize the respiratory and immunological effects of O_3, NO_2, and sulfuric acid. The research program will also develop theoretical models of respiratory tract deposition. Clinical studies will clarify the risks to potentially susceptible subpopulations. This research will include chronic animal toxicology studies to determine the relationship between long-term exposure to urban patterns of ozone and the onset or exacerbation of chronic lung disease. Epidemiology studies will emphasize chronic cardiopulmonary effects of ambient and indoor combinations of pollutants.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. To support development of regulations for toxic air pollutants, the Integrated Air Cancer Project (IACP) will emphasize pharmacokinetics studies to clarify the relationship between exposure and dose. The research office will develop a physiologically-based pharmacokinetics model for predicting dosimetry of volatile organic compounds in humans. Also, the program office will conduct studies which will assess the mutagenic and carcinogenic effects of vapor phase mixtures, as well as, the non-cancer effects of urban mixtures (both source emissions and ambient concentrations), and dose-response relationships for individual compounds and complex mixtures. Dosimetry studies will focus on pulmonary deposition and dose to genetic materials. Bioassays will be developed and validated for use in biomonitoring networks.

Provide Scientific Support to the Mobile Source Regulatory Program. This research program provides data for Agency policymakers on the risks to public health and welfare from exposure to automotive emissions and the atmospheric transformation products of these emissions. The program office will conduct additional research to determine the contribution of motor vehicle emissions to the mutagenicity of ambient air and to assess DNA adducts as biomarkers of risk from mobile source emissions. This research program will also study the effect of alternative fuels on the mutagenic activity of automotive emissions including analyses of alternative fuel use required under the Alternative Motor Fuels Act of 1988 which will be used for a new biannual Report to Congress. Finally the program office will study health effects of motor vehicle fuels, additives, and alternative fuels (such as methanol).

Provide Scientific Data Necessary to Determine Sources, Exposures, Health Effects and Control Strategies Associated with Indoor Air Pollutants. Indoor air research will emphasize the health effects of combustion products, "sick building syndrome," volatile organic compound mixtures, and environmental tobacco smoke (ETS). The research office is proposing to complete a report on the effects from inhalation of chemical mixtures found in indoor environments. Biomarker research will examine ways that can be used to estimate exposures to ETS. Results of these studies will be used to develop health risk assessments. Other new research will include research on non-cancer health effects, the genotoxicity of emissions from various indoor combustion appliances, and associated mitigation strategies. The program office will expand to other areas including exposure and dosimetry of environmental tobacco smoke, including continued research on other exposure biomarkers.

Health Effects Institute. The principal goal of the Health Effects Institute (HEI) is to gather information and conduct research on the health effects of motor vehicle emissions. Research will focus on human dose-response characterization, and the quantification of human risk from mobile source pollutants, including alternative fuels.

1990 Program

In 1990, the Agency is allocating a total of $23,019,400 supported by 114.0 total workyears for this program, of which $6,544,100 is from the Salaries and

Expenses appropriation and $16,475,300 is from the Research and Development appropriation.

This research program will study acute, sub-chronic, and chronic exposures to ozone, sulfur dioxide and nitrogen dioxide and other NAAQS pollutants to determine effects on various systems (including respiratory, metabolic, and immune systems). This program office will also expand research on acid aerosols to include studies on host defense mechanisms and will include a report on the response of the human respiratory tract to acute exposure to acid aerosols. Animal toxicology and human epidemiology studies on NO_2, O_3, SO_2, and sulfuric acid will emphasize research on the relationship between exposure, dose, and effects (including respiratory disease). The Interdivisional Air Toxics Program is concerned with the genotoxic effects associated with exposure to complex mixtures and will also study the impact of alternative fuels and their emissions on human health. An assessment will be conducted on the contribution of mobile source emissions to the genotoxicity of ambient urban aerosol mixtures. Indoor air research focuses on the identification and evaluation of biomarkers for the particulate and vapor phases of environmental tobacco smoke (ETS) and on chamber studies evaluating indoor VOCs as it relates to "sick building syndrome." There will be an assessment of the contribution of wood burning and automobile emissions to the mutagenicity and carcinogenicity of airborne pollutants. There will also be a report assessing the potential carcinogenicity of combustion emissions from unvented indoor kerosene heaters. Support is also provided for the Health Effects Institute (HEI) which is studying the various aspects of criteria pollutant toxicity and the health effects associated with mobile source pollutants (including diesel exhaust, aldehydes, and alternative fuels).

1989 Accomplishments

In 1989, the Agency obligated a total of $20,846,900 supported by 111.7 total workyears for this program, of which $7,422,400 was from the Salaries and Expenses appropriation and $13,424,500 was from the Research and Development appropriation.

Twenty reports/articles were issued in the following research areas: scientific support for development and review of primary and secondary NAAQS (one report is on prolonged exposure to ozone at or below current one-hour NAAQS); support for development of regulations for hazardous air pollutants; support for the mobile source regulatory program (one report is on the effects of atmospheric transformation on the mutagenicity of gaseous gasoline emissions); and support for evaluation of effects associated with indoor air pollutants. There was an assessment of the comparative mutagenicity and carcinogenicity of combustion source emissions.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $9,982,500 supported by 58.4 total workyears for this program, of which $4,180,300 will be for the Salaries and Expenses appropriation and $5,802,200 will be for the Research and Development appropriation. This represents an increase of $510,800 in the Salaries and Expenses appropriation and an increase of $882,600 in the Research and Development appropriation, and an increase of 2.0 total workyears. The increase in Salaries and Expenses appropriation reflects a general enhancement of in-house support; the increase in Research and Development reflects new work in alternative fuels, emissions inventory, and indoor air.

Provide Support to Develop NSPS and SIPs. Research to support development, review, and enforcement of State Implementation Plans and promulgation of New Source Performance Standards (NSPS) includes: (1) field demonstration of the LIMB/ADVACATE process for SOx and NOx, and (2) the completion of the field demonstration of reburning as a means of NOx control on cyclone burners. This research program will conduct an evaluation of selective catalyst reduction (SCR) for NOx reduction. There will be a Joint Symposium on stationary combustion NOx control in 1991. Also, the program office will conduct studies of PM_{10} control from wood stove emissions and ozone non-attainment by controlling area VOC emissions at a reduced rate. There will be an assessment report on the role of consumer/commercial solvents in ozone non-attainment, including emissions reductions approaches for the highest volume sources. New research in this area will include the development of emissions inventory methods for criteria pollutants which will support acid deposition, ozone non-attainment, and PM_{10} implementation programs. The research office will emphasize improved area source emission estimation techniques for data handling and processing procedures and VOC emission factors.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. The Clean Air Act directs EPA to provide information on control techniques for hazardous air pollutants. To implement this requirement, the research program supports the operation of the Air Toxics Control Technology Center. The VOC control program will develop guidelines for measuring the compliance effectiveness of air toxic regulations and an engineering quality assurance program for permitting. SARA, Title III support activities will focus on the evaluation of process hazards. An enhanced emissions inventory program for air toxics will compile available data on a national basis, develop estimation methodologies and validation techniques, and improve air toxic emission and speciation factors. This will include a report on the development of improved emission factors for methane for selected anthropogenic sources. Also, a Pollution Prevention Project will begin that will identify, develop, and demonstrate prevention techniques which reduce emissions of volatile organic compounds (VOC's) emitted from area sources such as consumer products and industrial solvents. This will be a joint EPA, Regional, State, and industry effort. The research office is preparing a report on the development of a secondary combustion woodstove for reducing particulate emissions to or below the 1990 NSPS. The research program will also include a report targeting opportunities for mitigation research.

Provide Scientific Support to the Mobile Source Regulatory Program. This research program will study the impact from alternative fuel use as required under the Alternative Motor Fuels Act of 1988 for an biennial Report to Congress. Emissions from the production, distribution, and marketing of alternative fuels (such as methanol, ethanol, compressed and liquified natural gas, and/or reformulated gasoline/diesel) will be characterized.

Provide Scientific Data Necessary to Determine Sources, Exposures, Health Effects and Control Strategies Associated with Indoor Pollutants. In pursuance of the Indoor Air Quality Implementation Plan, the research program will complete methods for testing the performance of air cleaners. Commercially available units will be tested for their effectiveness in removing particles and vapors within indoor environments. The performance testing results will be used by OAR in public information documents. The research office is proposing to complete two reports on (1) biocontaminant control by humidity control systems, air cleaners, and biocides, and (2) on indoor pollutant "sinks." This research program will also test indoor materials using an expanded list of products, to increase our knowledge of which products are low-emitting, and desirable for use in buildings to prevent indoor air quality complaints and exposures to potentially hazardous chemicals. The program office will expand research into the methods and procedures for investigating indoor air quality (IAQ) problems in buildings.

1990 Program

In 1990 the Agency is allocating a total of $8,589,100 supported by 56.4 total workyears for this program, of which $3,669,500 is from the Salaries and Expenses appropriation and $4,919,600 is from the Research and Development appropriation.

In support of NAAQS compliance, this research program will study control technologies for SO_2 and NOx including the refinement of the process of making the sorbent for the ADVOCATE process for SOx and NOx reduction and the evaluation of selective catalyst reduction (SCR). The PM_{10} technical barriers program focuses on the control of particles and condensible organics from woodstoves. The research office will complete reports on kerosene heater emissions, retrofit technology for existing woodstoves, the Boise, Idaho field study of woodstove emissions, as well as, low emission material and products. The ozone non-attainment research is concerned with technical barriers and options for controlling area VOC emissions. The research program will expand the Air Toxic Control Technology Center. The research program will develop jointly with OAR a VOC control strategy to deal with ozone non-attainment. Reports on area volatile organic compound (VOC) sources and control options to support the Agency's post-1987 ozone non-attainment strategy, and application of conventional particulate control technology in major areas of concern will be completed. The research program office continues to provide technical support to EPA program offices, Regions, States, and localities on prevention of accidental releases and short-term toxics emissions. Indoor air research focuses on the evaluation of air cleaners, chamber studies of organic emissions from indoor sources, and the modelling and source characterization of indoor pollutants.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,411,700 supported by 56.9 total workyears for this program, of which $3,376,500 was from the Salaries and Expenses appropriation and $3,035,200 was from the Research and Development appropriation.

In the indoor air research program, personal computer models for evaluating indoor air quality control options were developed. Reports were produced on procedures for measuring emissions from indoor material and products and on the effectiveness of air cleaners for IAQ control. SO_2 and NOx control technologies were researched. A report on the development of an advanced process which utilizes calcium silicate sorbents (ADVACATE) to control acid gases from combustion sources was completed. Technical support for NSPS compliance and new source control evaluation were provided to Regions and States. Control assessments and technology development were done for key air toxics sources.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $2,886,300 supported by 13.8 total workyears for this program, of which $1,253,000 will be for the Salaries and Expenses appropriations and $1,633,300 will be for the Research and Development appropriation. This represents an increase of $327,100 in the Salaries and Expenses appropriation and an increase of $386,500 in the Research and Development appropriation and no change in total workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for determining the effects of air pollutants on the environment; and the increase in the Research and Development appropriation for research into alternative fuels.

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. Data from EPA's acid deposition research efforts and other air pollution research efforts indicate that tropospheric ozone may have significant adverse impacts on forests. Therefore, the impact of ozone damage on economically and ecologically significant forest species will be assessed to determine if the damage occurring supports a new ozone standard. Research on tree responses will begin to assess the risk from ozone on major commercially valuable forest tree species in areas that are most at risk. EPA's research program will be closely coordinated with the Departments of Agriculture, Interior, and Energy, as well as private industry research organizations such as the Electrical Power Research Institute.

1990 Program

In 1990, the Agency is allocating a total of $2,172,700 supported by 13.8 total workyears for this program, of which $925,900 is from the Salaries and Expenses appropriation and $1,246,800 is from the Research and Development appropriation.

The research program will conduct research to determine the effects of ozone of forests especially in sensitive tree species with emphasis on species of economic importance. Selected forest species are being exposed to ozone levels which are likely to occur in forest regions of the U.S.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,022,800 supported by 14.3 total workyears for this program, of which $745,700 was from the Salaries and Expenses appropriation and $1,277,100 was from the Research and Development appropriation.

A research plan was completed and peer-reviewed. Exposure studies on target tree species were initiated. A publication of a comprehensive research plan to determine the effects of tropospheric ozone on U.S. forests was completed.

CHARACTERIZATION, TRANSPORT, AND FATE

1991 Program Request

The Agency requests a total of $12,983,900 supported by 57.0 total workyears for this program, of which $3,962,100 will be for the Salaries and Expenses appropriation and $9,021,800 will be for the Research and Development appropriation. This represents an increase of $426,800 in the Salaries and Expenses appropriation, and an increase of $1,091,400 in the Research and Development appropriation and 2.0 total workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for development of models to predict the existence and movement of air pollutants. The increases in Research and Development appropriations reflects an increase in atmospheric transport and fate research on ozone non-attainment and alternative fuels. These increases also represent a transfer of the China studies research to the multimedia subactivity and a small transfer of NOAA salaries to the Office of Air and Radiation (OAR).

Provide Scientific Support to Develop and Review Primary and Secondary NAAQS. This research program will focus on the atmospheric formation and fate of acid aerosols. Research will begin on a new integrated program to study acid aerosol formation and neutralization to enable the Agency to understand how to control or curtail formation of acid aerosol pollutants in the atmosphere. This research program will apply existing models and emissions inventories to acid aerosols and related pollutants, such as ammonia, and also to use with estimating regional exposures. Finally the program office will modify simple photochemical models to include important pollutant parameters that contribute to visibility reduction.

Provide Scientific Support to Develop NSPS and SIPs. To comply with the Clean Air Act, the States and EPA must have air quality models to develop and review SIPS for urban ozone. To assist in that regard, the program office will provide an evaluated chemical mechanism that predicts ozone formations for use by State governments in preparing ozone SIPS. Research will examine the role of biogenic VOCs and other factors in affecting ozone non-attainment and proposed control strategies. The Regional Oxidant Model (ROM) will be used to determine the impact of various VOCs, including biogenics and NOx emissions on ozone control strategies for the Northeastern States and will expand to be able to predict long-term (seasonal) type Regional ozone air quality estimates.

The research program will use data from the 1988 Acid Deposition field study to evaluate the Regional Particulate Model. The Regional Particulate Model will be used to assess the Regional or transmitted component of particulate matter that impacts local urban atmospheres. Also, source apportionment techniques will be developed that will be used to assess the individual contribution of sources to an air quality problem.

Provide Scientific Support to Develop Regulations for Hazardous Air Pollutants. In order to increase the Agency's understanding of how HAPs are formed and to estimate their expected lifetime in the atmosphere, laboratory and field studies will be conducted to determine the atmospheric reaction rates and transformation products of HAPs under Agency review. HAP chemistry will be studied under conditions that simulate atmospheric conditions. Studies will be conducted to identify potential HAPs produced in air from innocuous pollutants emitted from a variety of sources. Field measurements will quantify the ambient concentration variabilities of HAPs in the urban atmosphere and describe the associated atmospheric processes and implication for exposure. Smog chamber studies will measure the reaction of air toxics and the formation of other hazardous products from atmospheric transformation of HAPs and high-volume manufactured organics. These studies will describe the formations, removal, and fate of air toxics in complex atmospheric mixtures. As part of ORD's Integrated Air Cancer Project, studies will be conducted to examine the formation, stability, and transformation of volatile and aerosol bound organics and potentially carcinogenic materials in the atmosphere. The atmospheric transformation will be conducted by using bioassay-coupled smog chamber irradiation experiments that simulate atmospheric conditions.

Provide Scientific Support to the Mobile Source Regulatory Program. To assess potential risk to public health and welfare, and to support regulatory development, this research program will evaluate the impact of mobile source control technologies on evaporative and exhaust emissions with emphasis on alternative fuels. Characterization will include both regulated and selected unregulated emissions and will also determine the significance of "running-loss" evaporative emissions of the tailpipe and evaporative hydrocarbons at elevated ambient temperatures. A Pollution Prevention Project will be conducted on the potential use of alternative fuels (such as methanol) to reduce pollutant loading to the atmosphere. This joint ORD/OPPE study will include characterization of the emissions of vehicles powered by alternative fuels and air quality assessment studies. New studies will include analyses required under the Alternative Motor Fuels Act of 1988 including development of new analytical methods for measuring the emissions from vehicles using alternative fuels, characterize combustion and evaporative emissions products, and atmospheric transformation products and new sensitive, selective procedures for monitoring human and ecosystem exposure to the compounds of interest.

1990 Program

In 1990, the Agency is allocating a total of $11,465,700 supported by 55.0 total workyears for this program, of which $3,535,300 is from the Salaries and Expenses appropriation and $7,930,400 is from the Research and Development appropriation.

This research program supports the development and evaluation of secondary air quality standards for PM_{10}. Ozone non-attainment research will include chemical models to reduce errors or uncertainties in predicting ozone formation associated with precursor emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx). This research program will evaluate the Regional Oxidant Model (ROM) against field data to determine the impacts of simulated VOC and NOx emission controls on ozone air quality. Other ozone research includes a program to monitor VOCs and NOx to help determine reasons for ozone non-attainment. An improved source apportionment model will be developed for Regional scale aerosols. A report on aerosol sources for the Eastern United States will be completed. Special studies will be conducted to examine the potential role of biogenic VOCs and other factors ozone non-attainment areas. The research program will conduct studies of HAP levels in urban atmospheres and characterization of mobile source emissions from vehicles equipped with new emission control devices using conventional gasoline fuels or alternative fuels (such as methanol-blended fuels). An article will be published characterizing tailpipe, evaporative, and refueling emissions from gasoline fueled automobiles.

1989 Accomplishments

In 1989, the Agency obligated a total of $11,003,000 supported by 54.7 total workyears for this program, of which $3,733,100 was from the Salaries and Expenses appropriation and $7,269,900 was from the Research and Development appropriation.

In 1989, an improved version of the Regional Oxidant Model (ROM) was used to demonstrate the impact of regional VOCs and NOx control strategies with respect to their impact on Regional ozone air quality. Also, studies were initiated in the Atlanta area to assess the role of biogenic VOC emissions and other factors in the ozone non-attainment problem areas. A study was completed on the characterization of emissions from a flexible-fuel vehicle using both gasoline and gasoline/methanol blends. An article was published that evaluated emissions from diesels equipped with advanced emission control technology. Reports were completed on the recommended modifications to the Complex Terrain Dispersion Model, and on the identities of HAPs produced in the atmosphere from ubiquitous innocuous pollutants.

STRATOSPHERIC MODIFICATION

1991 Program Request

The Agency requests a total of $26,000,000 supported by 42.9 total workyears for this program, of which $3,922,500 will be for the Salaries and Expenses appropriation and $22,077,500 will be for the Research and Development appropriation. This represents increases of $1,403,900 and $9,190,100 respectively, and an increase of 12.0 total workyears. The increase in both appropriations represents a substantial increase in the global warming research program in order to provide policymakers with reliable projections on the potential for global warming and its environmental consequences. The increase is also due to continued work addressing the scientific uncertainties associated with ozone depletion. This work includes a multidisciplinary research program to determine the impacts of increased UV-B radiation on terrestrial and aquatic ecosystems and on human health, and to investigate mitigative solutions.

Provide Scientific Data Necessary to Determine the Effects of Stratospheric Ozone Depletion and Develop Control Technologies. Through the Montreal Protocol, the international community has formally identified depletion of the stratospheric ozone layer as one of the most important problems facing the world today. To address the scientific uncertainties associated with ozone depletion, the Agency will conduct a multidisciplinary research program in terrestrial and aquatic ecosystems, human health, and emissions and mitigative solutions. Studies of the effects of UV-B radiation on terrestrial ecosystems will evaluate the relationship between UV-B levels (dose) and other widespread anthropogenic factors such as global climate change. This will include reports on the effects of UV-B radiation on human immunosuppression, and wetland rice ecosystems. This will also include research on UV-B effects on the marine food web and biogeochemical cycling and on the evaluation of alternate compounds to CFCs and halons, and technologies to replace those used for such purposes as refrigeration, insulation, and fire extinguishment. This will include a report on alternatives to halons as fire extinguishants and a status report on alternatives for insulation which do not use CFC's. Important issues under investigation include impacts on wetland rice ecosystems, monitoring surface fluxes of UV-B radiation, effects on marine fisheries, and assessment of current scientific understanding. The research program will concentrate on developing ways to reduce emissions of chemicals that contribute to stratospheric ozone depletion, including CFCs, halons, and N2O, and to transfer technology within the U.S. and to developing nations. Finally, the research program will establish a data base for N_2O emissions from a variety of stationary combustion sources including the potential for plume formation.

Provide Scientific Data Necessary to Determine the Effects of Global Warming and Develop Control Strategies. The potential impact of global climate change could pose the largest and most significant long-term man-made environmental problem of the future. To provide policymakers with reliable projections on the potential for global warming and its environmental consequences, the current research program will be expanded substantially. The EPA has developed a research program in conjunction with the government-wide research effort coordinated by the Committee on Earth Sciences (CES) of the White House Federal Coordinating Council for Science, Engineering, and Technology. The 1991 program will focus on the role of the terrestrial biosphere in atmospheric trace gas concentrations and surface energy balance, and what benefits can be attained from mitigation technologies and practices. This will include a report on practical and beneficial techniques for mitigation of trace gases emissions and processes that control emissions of radiatively important trace gases from the biosphere. The proposed research, which has been coordinated with other Federal agencies such as NASA, NOAA, and the DOE, will emphasize estimating potential changes in such major resources as forested ecosystems and agro-ecosystems. This will include a report on the sensitivity of forest regions, worldwide, to global change. The program office will expand work to include organic trace gas emissions from plant canopies, as well as to develop models for carbon fluxes from terrestrial ecosystems. This research will model anthropogenic influences on ozone concentrations in the free troposphere and will develop regional climatic scenarios. The program office will also conduct statistical analyses of climatic variability and regional consequences of variation, and quantification of feedback effects from biological processes (such as evapotranspiration) and physical conditions (such as albedo changes). Research will include analyses of the effects of climate change on forest growth and reproduction; changes in carbon sequestration; semi-arid and agroecosystem responses; climate-biosphere interaction effects; marine and near-coastal ecological responses; and freshwater biological effects. Finally, the program office will conduct research to determine the ambient measurements and factors required to understand emissions from biomass burning.

1990 Program

In 1990, the Agency is allocating a total of $15,406,000 supported by 30.9 total workyears for this program, of which $2,518,600 is from the Salaries and Expenses appropriation and $12,887,400 is from the Research and Development appropriation.

In response to increasing national and international concern over depletion of the stratospheric ozone layer and the potential for significant global temperature increases over the next several decades, the Agency is expanding research on the ecological and human health effects associated with these atmospheric changes. This research is providing Agency policymakers with the data needed to direct and develop an integrated national strategy to address these global environmental problems. The stratospheric ozone depletion research program is compiling and analyzing data from in-house, national, and international sources to produce a scientific assessment on the adverse effects of stratospheric ozone depletion. Specifically, the research program office, in order to address the scientific uncertainties associated with ozone depletion, will conduct a multidisciplinary research program that will determine the impacts of increased UV-B radiation on terrestrial, aquatic ecosystems, and on human health and will investigate mitigative solutions. Terrestrial effects studies will emphasize the impact of UV-B levels (dose) and other widespread anthropogenic factors such as global climate change and tropospheric ozone on agricultural and forested ecosystems. Aquatic effects research will focus on determining UV-B effects on the marine food chain and fisheries production. This will include development of a predictive UV-B dose response model for commercially important fish. The program office will complete two reports: the effects of UV-B radiation on rice yield, and the status of alternative refrigerants for home refrigerators. Research results will be distributed within the U.S. and to other developing nations. Increasing national and international concern over the potential for drastic global climate change resulting from pollutants in the troposphere and stratosphere, and EPA's new responsibilities resulting from the Global Climate Protection Act of 1987, required an expansion of EPA's global climate research program in 1990. The 1990 program will focus on the impact of climate change on key ecosystems (such as boreal forests). The proposed research, which has been coordinated with other Federal agencies such as NASA, NOAA, and the DOE, will emphasize estimating potential changes in such major resources as forested ecosystems. The research program will evaluate feedbacks from ecosystem and land-use changes, including changes in tropical forests, to changes in climate. Also, emissions research will develop data for source/sink relationships for a variety of radiatively important trace gases, and evaluate potential emission management techniques. Two reports will be completed on: the estimation of relative importance of major forest types as sources and sinks for radiatively important trace gases, and soil microbial processes relating radiatively important trace gas fluxes and water balance. Atmospheric modeling will expand to include estimates of global consequences of tropospheric air-quality changes. Possible climatic conditions resulting from global warming will be developed for a wide variety of Regional situations. Finally, research will be initiated on the effects of global warming on tropical vegetation, the possible consequences of reforestation strategies on total carbon and nitrogen levels, and some effects of warming on high-latitude (taiga/tundra) ecosystems.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,588,000 supported by 13.2 total workyears for this program, of which $895,900 was from the Salaries and Expenses appropriation and $8,692,100 was from the Research and Development appropriation.

EPA scientists organized and participated in an international workshop on Global Climate Change and Rice at the International Rice Research Institute (IRRI) to begin to plan the cooperative research to be carried out by EPA and IRRI; sponsored a scientific "trilateral" (Federal Republic of Germany, The Netherlands, and the United States) workshop on the effects of UV-B radiation; participated in a NOAA scientific cruise to the Southeast Pacific including the Antarctic to investigate the effects of enhanced UV-B radiation on photosynthesis and the production of radiatively important trace gases by open ocean phytoplankton; and chaired a session on environmental effects of climate change at the Society for Environmental Toxicology in Toronto. The research office completed a report on the resource significance and sensibility on the most important fisheries likely to be affected by UV-B radiation. The research office developed a strategy that prioritized research projects that will examine the possible health effects resulting from increased exposure to ultraviolet radiation (UV-B) as a result of stratospheric ozone depletion. Experiments addressing the long-term effects of ambient and enhanced UV-B radiation on a single phytoplankton species demonstrated that, compared to the "no-UV" treatment, ambient levels of UV-B radiation decreased growth and photosynthesis of the species investigated. The research office used statistical models in an initial effort to estimate the potential effect of a 16% decline in stratospheric ozone on global fisheries production.

The program office conducted a review of alternative refrigerants to the CFCs which, along with computer modeling, has lead to the preliminary conclusion that a certain class of mixtures called non-azeotropic refrigerant mixtures has the potential for use in home refrigeration. Also, the program office initiated a program to determine the level of CFC contamination which could be allowed in recycled refrigerant with the cooperation of the Mobile Air-Conditioning Society, Motor Vehicle Manufactures Association, and the Society of Automotive Engineers. This new program has resulted in several large organizations agreeing to implement the use of recycling machines in their operations. Finally, the research office conducted a review of the present use of CFCs as propellants in aerosols and found many uses which could immediately utilize alternative formulations, as well as discovering that propellant replacements were not immediately available but might be available from the newer substitutes that are under development. The research office will use conclusions from this work to aid other nations in replacing their CFC aerosol propellant uses with alternatives as well as further decreasing the U.S. usage of CFCs as aerosol propellants.

EPA scientists conducted research and prepared a report on the sensitivity of ecological landscapes to climate change. The report identified regions in the Pacific northwest and the southeastern U.S. as being particularly sensitive to climate change. A major report was prepared on methods used to develop climate scenarios. In addition, scientists within the program made a major contribution to the Report to Congress on the Potential Effects of Global Climate Change on the United States. This contribution included support in developing the climate scenarios used to describe the potential effects, as well as interpreting the results. An Appendix was prepared by program scientists on the potential impacts of climate change on tropospheric chemistry.

The program office organized and chaired a session on the environmental effects of climate change at the annual meeting on the Society for Environmental Toxicology and Chemistry (SETAC). As a result of this session, the society will emphasize global climate change research at the 1990 annual meeting. Finally, over 40 papers were published, including 21 in peer reviewed literature of which one report evaluates air quality changes due to changes in tropospheric chemical reactions sensitive to climate change.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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AIR
Air Quality & Stationary Source Planning & Standards

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Emission Standards & Technology Assessment						
Salaries & Expenses		$5,489.7	$5,440.1	$5,371.4	$8,194.1	$2,822.7
Abatement Control and Compliance		$5,894.3	$8,231.1	$8,126.1	$14,128.7	$6,002.6
	TOTAL	$11,384.0	$13,671.2	$13,497.5	$22,322.8	$8,825.3
National Pollutant Policies, Strategies, and Rules						
Salaries & Expenses		$1,879.9	$2,267.6	$2,524.0	$2,947.5	$423.5
Abatement Control and Compliance		$9,349.4	$9,202.1	$9,074.9	$9,106.3	$31.4
	TOTAL	$11,229.3	$11,469.7	$11,598.9	$12,053.8	$454.9
State Program Policy Guidelines & Air Standards Development						
Salaries & Expenses		$5,595.9	$5,762.8	$5,411.7	$9,137.3	$3,725.6
Abatement Control and Compliance		$2,851.7	$4,528.6	$4,470.9	$7,971.8	$3,500.9
	TOTAL	$8,447.6	$10,291.4	$9,882.6	$17,109.1	$7,226.5
TOTAL:						
Salaries & Expenses		$12,965.5 -	$13,470.5	$13,307.1	$20,278.9	$6,971.8
Abatement Control and Compliance		$18,095.4	$21,961.8	$21,671.9	$31,206.8	$9,534.9
Air Quality & Stationary Source Planning & Standards	TOTAL	$31,060.9	$35,432.3	$34,979.0	$51,485.7	$16,506.7
PERMANENT WORKYEARS						
Emission Standards & Technology Assessment		90.4	94.7	93.1	125.1	32.0
National Pollutant Policies, Strategies, and Rules		29.5	39.3	41.3	45.0	3.7
State Program Policy Guidelines & Air Standards Development		95.9	100.3	97.5	139.5	42.0
TOTAL PERMANENT WORKYEARS		215.8	234.3	231.9	309.6	77.7

AIR
Air Quality & Stationary Source Planning & Standards

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
TOTAL WORKYEARS					
Emission Standards & Technology Assessment	93.6	94.7	93.1	125.1	32.0
National Pollutant Policies, Strategies, and Rules	30.3	39.3	41.3	45.0	3.7
State Program Policy Guidelines & Air Standards Development	98.0	100.3	97.5	139.5	42.0
TOTAL WORKYEARS	221.9	234.3	231.9	309.6	77.7

Air Quality and Stationary Source Planning and Standards

Budget Request

The Agency requests a total of $51,485,700 supported by 309.6 total workyears for 1991, an increase of $16,506,700 and 77.7 in total workyears from 1990. Of the request, $20,278,900 will be for the Salaries and Expenses appropriation and $31,206,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase in the Salaries and Expenses appropriation of $6,971,800 and an increase in the Abatement, Control and Compliance appropriation of $9,534,900.

EMISSION STANDARDS AND TECHNOLOGY ASSESSMENT

1991 Program Request

The Agency requests a total of $22,322,800 supported by 125.1 total workyears for this program, of which $8,194,100 will be for the Salaries and Expenses appropriation and $14,128,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,822,700 for the Salaries and Expenses appropriation, an increase of $6,002,600 in the Abatement, Control and Compliance appropriation, and an increase of 32.0 in total workyears from 1990. The increases will support new activities needed to implement the President's Clean Air proposal addressing air toxics and nonattainment of National Ambient Air Quality Standards (NAAQSs).

A major program emphasis in 1991 will continue to be air toxics, including development of standards under National Emission Standards for Hazardous Air Pollutants (NESHAPs) and other authorities and regulatory decisions for high priority pollutants and source categories. Program activities focus primarily on reducing the more than 1300-1600 cancer deaths per year and high individual risks that are estimated to result from toxic air pollutants. As a result of anticipated legislative changes, EPA will concentrate on developing a list of the major source categories of emissions of 191 pollutants; initiating work on developing maximum achievable control technology (MACT) for these source categories; responding to petitions to add or delete pollutants on the list; and developing guidelines for making alternative compliance determinations. During 1991 the Agency will focus on ten source categories in order to meet the two-year requirements of the anticipated new legislation. The Agency also will direct its efforts toward source categories associated with four-year requirements.

In 1991 EPA will continue developing new source performance standards (NSPSs) for two new source categories and control techniques guidelines (CTGs) for seven new source categories of volatile organic compound (VOC) emissions. Pursuant to requirements of the President's Clean Air proposal, the Agency will initiate an assessment of the need for and begin development of other federal measures for VOC control. In addition, the Agency will begin development of an alternative control techniques (ACTs) document for sources of nitrogen oxides (NO_x); reasonably available control measures (RACMs) for PM-10 sources (urban fugitive dust and residential wood combustion); and a study of the hazards to public health as a result of the emissions of listed pollutants from electric utilities.

The Agency will continue technology transfer to state and local agencies on ozone, PM-10 and air toxics controls through the National Air Toxics Information Clearinghouse (NATICH), the Control Technology Center (CTC), the Air Risk Information Support Center (AirRISC), and the Best Available Control Technology/Lowest Achievable Emission Rate (BACT/LAER) Clearinghouse.

1990 Program

In 1990 the Agency is allocating a total of $13,497,500 supported by 93.1 total workyears to this program, of which $5,371,400 is from the Salaries and Expenses appropriation and $8,126,100 is from the Abatement, Control and Compliance appropriation.

In 1990 EPA is continuing NSPS development. By the end of 1990, the Agency will have promulgated 46 NSPSs from the priority list, representing about 87 percent fulfillment of the 1977 Congressional mandate. The Agency is continuing work on NSPSs for two source categories, municipal waste combustion and landfills, that have not been added to the priority list. In addition, the Agency is devoting a major effort to development of standards of performance for hospital waste incinerators. The Agency is deferring development of the final six NSPSs on the priority list in order to complete higher priority work.

The current program is oriented toward regulation of source categories that emit ten hazardous air pollutants; development of NESHAPs for coke oven emissions; and refining a ranking approach for developing NESHAPs. This approach sets priorities and assesses source categories for NESHAPs based on multi-pollutant impacts on human health. With the completion of EPA's policy for setting NESHAPs, the Agency will initiate major efforts towards developing NESHAPs using this approach. Outputs in 1990 include promulgation of NESHAPs for the remaining source categories of benzene emissions and revisions to the reporting requirements for the asbestos NESHAPs.

To support efforts in the area of ozone nonattainment, EPA has begun developing CTGs for seven source categories of VOC emissions and an ACT document for one additional source category of NOx emissions.

Consistent with the National Air Toxics Strategy, the Agency is providing implementation support to state air toxics programs through the operation of four centers and clearinghouses and the publication of implementation support and technology transfer documents for air toxics, ozone, and PM-10 control.

1989 Accomplishments

In 1989 the Agency obligated a total of $11,384,000 supported by 93.6 total workyears, of which $5,489,700 was from the Salaries and Expenses appropriation and $5,894,300 was from the Abatement, Control and Compliance appropriation.

In 1989 the Agency promulgated three NSPSs, proposed rules for chromium (comfort cooling towers) under the Toxic Substances Control Act, and published the proposed response to benzene litigation, along with proposed benzene NESHAPs for four source categories.

NATIONAL POLLUTANT POLICIES, STRATEGIES AND RULES

1991 Program Request

The Agency requests a total of $12,053,800 supported by 45.0 total workyears for this program, of which $2,947,500 will be for the Salaries and Expenses appropriation and $9,106,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $423,500 in the Salaries and Expenses appropriation, an increase of $31,400 in the Abatement, Control and Compliance appropriation, and an increase of 3.7 total workyears. The increases support increased policy analysis for acid deposition issues, implementation of the Montreal Protocol for stratospheric ozone protection (including renegotiation and recycling activities), and increased indoor air pollution activities.

The President's Clean Air proposal will provide for an expanded Agency acid rain program in 1991 that will require significantly revised program development and implementation activities. The policy component of the program will continue to provide support to the Administrator and Assistant Administrator for their participation on the Domestic Policy Council (DPC) (or its successor organization) and the U.S. Bilateral Advisory and Consultative Group (BACG). The program will also initiate a project to use existing governmental and nongovernmental networks to promote increased use of energy conservation through least-cost utility planning and alternative energy supplies. In addition, the program will ensure that the ten-year $500 million interagency National Acid Precipitation Assessment Program (NAPAP) for research is responsive to policy needs. The program will participate in the development and revision of the final NAPAP Integrated Assessment. The program will co-chair the Acid Deposition Subcommittee of the Air and Radiation Research Committee to guide the acid deposition research program. The program will also provide support to the Department of Energy (DOE) through the Innovative Control Technology Advisory Panel (ICTAP) and will help evaluate the fifth DOE solicitation. The program will review, comment on, and resolve controversial air and other environmental permit issues for Clean Coal Technology (CCT) and other non-CCT innovative control projects.

To implement and support the Montreal Protocol in 1991 EPA will develop rules on trade with non-participating nations, methods for inspection of imported goods, rules for discouraging export of chlorofluorcarbon (CFC) technologies, and ways to transfer non-CFC technologies to lesser developed countries (LDCs). The Agency will expand technical assistance to LDCs, such as India, Mexico, China, and Brazil, with an emphasis towards energy efficiency. The CFC domestic program will include administration of allocations, collection of charges, initiation of any new rulemaking required by changes in the Montreal Protocol, and consideration of a national recycling effort to create a strategic reserve for existing uses. The Agency will undertake further risk assessments and refinements to existing data. The Agency will also work with industry to improve technology for fire fighting, refrigeration, and refrigeration systems. These efforts will focus on development of better mixtures, expansion of ammonia use, development of substitutes, and production of better foams. The Agency will expand technical assistance to private sector and Department of Defense activities for CFC/halon substitute technology. The Agency will also continue evaluations of the safety of alternative chemicals.

As part of its efforts to address global warming, EPA will explore technological options and mechanisms for control of methane emissions from livestock and will initiate evaluation of energy conservation measures. The Agency will carry out efforts to develop integrated models. The Agency will also develop a data base to inform industry and help organize responses that enhance long-term competition in domestic and foreign markets. These activities will speed development and deployment of technologies to decrease the production of greenhouse gases.

In 1991 the Indoor Air Program will provide Agency leadership and coordination within the federal establishment. EPA will maintain and expand contact with appropriate private sector organizations and state and local agencies. The Agency will issue reports on multiple chemical sensitivities and the impact of indoor air pollution on productivity. The Agency will also release a manual for conducting building investigations and a physician's handbook. In addition, the Agency will complete an initial report on the development of protocols for the identification and quantification of the "sick building syndrome."

New activities will focus on providing training programs through existing regional training centers and designing and implementing information distribution mechanisms. In 1991 EPA will complete a new two-year program to develop basic Indoor Air Quality (IAQ) training programs for state and local governments. The training programs will use guidance documents and other publications completed in 1990. In 1991 EPA will continue operation of an IAQ information clearinghouse. The Agency will also initiate a program to inform building owners and employers about the significant economic costs of indoor air pollution on the workforce. In addition, the Agency will produce information briefs for the public on new home construction techniques and smoking place policies for building occupants. Finally, the Agency will complete an international inventory of IAQ activities compiled under the aegis of the North Atlantic Treaty Organization (NATO) Committee on the Challenges of Modern Society (CCMS).

1990 Program

In 1990 the Agency is allocating a total of $11,598,900 supported by 41.3 total workyears to this program, of which $2,524,000 is from the Salaries and Expenses appropriation and $9,074,900 is from the Abatement, Control and Compliance appropriation.

In 1990 the acid rain policy program will continue responding to NAPAP, the ten-year, $500 million, interagency research program. The policy program will complete coordination of primary research on the economic aspects of the NAPAP final report. The program will continue to co-chair the Acid Deposition Subcommittee of the Air and Radiation Research Committee which guides acid deposition research. The program will continue analyses of acid rain legislative proposals including the Clean Air Act amendments. The program will also continue support to the Administrator and Assistant Administrator for their participation on the DPC and the BACG. Also, in 1990 EPA will continue to provide advice to DOE, through the ICTAP, on DOE's five-year, $2.5 billion CCT Program. The acid rain program will continue to review, comment on, and help resolve controversial air permit application issues for CCT demonstration projects, and will assist DOE in obtaining air, water, and solid waste CCT permits.

In 1990 EPA will continue many activities started in 1989 and will initiate new efforts for stratospheric ozone protection. Domestically, the Agency will develop and refine its stratospheric ozone regulatory program, as well as operate and enforce the program established in 1989. The current rulemaking will be revised to charge market value for the privilege of producing or importing CFCs or halons. Monitoring of CFCs and halons production will continue with timely data review, additional compliance monitoring, technology reviews, better information control, and overall improved systems performance. The program will also be integrally involved in the coordination of domestic and international efforts to develop alternative technologies.

The program will continue to support the implementation of the Montreal Protocol. In 1990 EPA will participate in a series of atmospheric, environmental, technological, and economic assessments. The Agency will participate on the Protocol's working groups and ad hoc groups to negotiate U.S. technology transfer responsibilities. In addition, the Agency will continue to participate in efforts to obtain other nations' signatory approval of the Protocol and will work with other federal agencies to negotiate further revisions. The tropospheric climate warming element of the global change program will initiate exploratory analysis of some point and non-point source emissions, including methane, and their associated control technologies, and emissions impact on existing pollution control decisions.

In 1990 the indoor air program includes policy analyses; coordination within the federal establishment; participation in a NATO-CCMS inventory of indoor air activities; development and issuance of additional fact sheets on key aspects of IAQ; and development of guidance on new home construction, commercial and public building design, workplace smoking, and school IAQ management. The indoor air program will maintain and expand contact with appropriate private sector organizations and state and local agencies involved in IAQ activities. The program will initiate training activities and develop additional information on risk and economic effects of indoor air pollutants. The program will also conduct a comprehensive rural towns indoor air survey in cooperation with the Vermont Department of Health. In addition, the program will expand its analysis and conduct field studies and surveys to determine the extent of various "sick building" problems, including the issues of chemical sensitivity and building diagnostics. The indoor air program will initiate the implementation of an IAQ information clearinghouse.

1989 Accomplishments

In 1989 the Agency obligated a total of $11,229,300 supported by 30.3 total workyears, of which $1,879,900 was from the Salaries and Expenses appropriation and $9,349,400 was from the Abatement, Control and Compliance appropriation.

In 1989 the acid rain program continued to focus on acid rain policy and implementation issues. The program provided detailed legislative analysis on new and potential legislative actions under the Clean Air Act. The program also provided technical and environmental assistance to DOE on the CCT Program and NAPAP initiatives. The program issued the final report from the State Acid Rain (STAR) project. The report addresses potential acid rain control program implementation issues. The acid rain program continued to respond to petitions calling for additional control on U.S. sulfur dioxide (SO_2) and nitrogen oxides (NO_x) emissions. The program also continued support for on-going Administration discussions with Canada on a possible bilateral accord.

In 1989 EPA focused on implementation of the domestic rule for CFCs and halons and further analyses of possible follow-up activities to regulatory and non-regulatory actions. A program was established and implemented for enforcing regulatory levels on the production and consumption of CFCs and halons. This involved developing a tracking system for permits, completing and implementing a reporting and record keeping system, developing an enforcement strategy, and assessing the market responses to regulation. In addition, the program continued to perform Montreal Protocol assessments and studies to support the United Nation's Environmental Program in the international implementation of the Protocol. The program expanded international coordination among various groups and activities concerned with developing alternative technologies and transfer of technologies to lesser developing countries in 1989. The program continued to assess possible emission sources and other factors in global climate-warming changes.

In 1989 the indoor air program continued to provide a framework to address indoor air problems through policy development, federal coordination, and information dissemination. In 1989 the program completed two technical documents initiated in 1988, one on the mitigation of environmental tobacco smoke and the other on prevention of building-related problems. In addition, in-house staff carried out an Agency and Interagency coordination role and developed indoor air pollution information and mitigation fact sheets. The indoor air program initiated efforts to communicate with various target groups on possible "sick building" causes and solutions. The report to Congress on the long-term federal role in indoor air quality was completed and a booklet on indoor air quality was reprinted and reissued.

STATE PROGRAM GUIDELINES AND AIR STANDARDS DEVELOPMENT

1991 Program Request

The Agency requests a total of $17,109,100 supported by 139.5 total workyears for this program, of which $9,137,300 will be for the Salaries and Expenses appropriation and $7,971,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,725,600 for the Salaries and Expenses appropriation, an increase of $3,500,900 in the Abatement, Control and Compliance appropriation, and an increase of 42.0 in total workyears from 1990. The increase will support activities that are needed to begin implementation of the President's Clean Air proposal for operating permits, acid deposition, and nonattainment.

In 1991 the Agency will continue to provide management and assistance for attainment of NAAQSs and prevention of significant deterioration (PSD). The regulatory impact analyses (RIAs) for the ozone and lead NAAQSs review will be completed and a proposal to revise or reaffirm these standards will be published. Revised or reaffirmed NAAQSs for sulfur dioxide (SO_2) will be promulgated. The criteria documents for the carbon monoxide (CO) and nitrogen dioxide (NO_2) NAAQSs review will be completed and the staff papers will be reviewed by the Clean Air Scientific Advisory Committee (CASAC). Exposure analyses, RIAs, and other regulatory support activities will also be underway for CO and NO_2 NAAQSs review.

The Agency will develop guidance and regulations needed to implement the State Implementation Plan (SIP) activities for ozone, CO, and PM-10 under new legislation. These will include developing completeness criteria, revising and issuing the list of nonattainment areas, and establishing ozone transport areas. The Agency will provide procedures and techniques for determining required emission reductions, evaluating and selecting alternative control measures, preparing control strategy demonstrations, and analyzing transport strategies in the Northeast. Assistance in identifying, adopting, and implementing nontraditional control measures that will directly involve the public (e.g., transportation controls and consumer solvent substitution) will be provided. Review and regulatory action on SIP submittals from the initial SIP calls will continue.

Review and regulatory action on PM-10 SIPs will continue, especially for newly identified nonattainment areas (Group II areas). Policy, guidance, and assistance in problem definition and development of mitigation strategies will be provided for a variety of problems contributing to long-term nonattainment. These include woodstoves, prescribed burning, agricultural activities, fugitive source and nontraditional source control measures (e.g., street cleaning), and secondary particle formation. Management and review of SIPs submitted by states will continue. Guidance and assistance to Regional Offices for developing court-ordered PM-10 Federal Implementation Plans (FIPs) will continue. Regulations to control sources contributing to visibility impairment in the Grand Canyon will be promulgated. Innovative measures to reduce the SIP backlog and expedite processing, including a computerized SIP tracking and information system, will be fully implemented.

State and local air toxics programs will be further enhanced with the implementation and revision of multi-year development plans. Technical and program support to assist states in evaluating and regulating high-risk point sources (HRPSs) and multi-pollutant urban toxics problems will continue. The new source review (NSR) program will provide guidance and assistance to Regions and states that are permitting new sources. Support to national litigation over current regulations will be provided. Rulemaking on PM-10 increments will be completed. New procedures for conducting state program audits will be implemented.

Guidance and regulations will be developed to implement anticipated new legislation for operating permits. These include model permits, standardized application forms, fee recovery requirements, and monitoring and reporting requirements. Key elements of phase I of the acid deposition program included in anticipated legislation will also be developed. These include regulations governing continuous emission monitors; the issuance, trading, and banking of allowances; and the participation of industrial sources in the allowance system. An emissions/allowance tracking system will be developed to facilitate free and open trading. Regulations and a program for Federally-issued phase I permits will also be developed.

1990 Program

In 1990 the Agency is allocating a total of $9,882,600 supported by 97.5 total workyears to this program, of which $5,411,700 is from the Salaries and Expenses appropriation and $4,470,900 is from the Abatement, Control and Compliance appropriation.

In 1990 review of the staff paper for the lead NAAQS will be completed by CASAC and a proposal to revise or reaffirm the standard will be prepared. Work on the next round of reviews of the NAAQSs for ozone, CO and NO_2 will be underway. An evaluation of the need for an acid aerosols and/or fine particle NAAQS will also be in process.

In the SIP area, primary emphasis will be on implementing ongoing programs for CO and ozone nonattainment areas and developing and reviewing PM-10 SIPs. For ozone and CO, these activities will focus on ensuring compliance with SIP calls issued in May 1988 and November 1989, securing and reviewing revised emission inventories, and reviewing SIP clean-up rules. Guidance and assistance will be provided for long-term PM-10 nonattainment areas. PM-10 SIP submittals will be reviewed. PSD increments will be proposed for PM-10. Regulations to control sources contributing to visibility impairment in the Grand Canyon will be proposed. Guidance and assistance to Regional Offices will be provided for developing court-ordered FIPs for both ozone/CO and PM-10 nonattainment areas. Policy and regulations to improve NSR programs will be published and workshops will be held. Guidance and assistance to develop and implement state air toxics programs through multi-year development plans will continue. Workshops, emissions factors, inventory procedures, and other support will be provided to help states evaluate and regulate HRPSs and multi-pollutant urban toxic problems.

1989 Accomplishments

In 1989 the Agency obligated a total of $8,447,600 supported by 98.0 total workyears, of which $5,595,900 was from the Salaries and Expenses appropriation and $2,851,700 was from the Abatement, Control and Compliance appropriation.

NAAQS review activities in 1989 focused on lead, ozone, SO_2 and possible standards for fine particles and acid aerosols. Second-round SIP calls for deficient CO and ozone SIPs were issued. PSD increments for NO_2 were promulgated. Decisions on attributing visibility impairment in PSD Class I areas to specific sources were promulgated in four states and were proposed in three states. Revised procedures to improve and expedite SIP processing were published. Guidance and assistance were provided to Regional Offices in preparing court-ordered ozone/CO FIPs and negotiating FIP settlements in Illinois and Utah.

AIR
Mobile Source Air Pollution Control & Fuel Economy

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Emission Standards, Technical Assessment & Characterization						
Salaries & Expenses		$4,757.3	$5,080.1	$4,908.0	$7,421.2	$2,513.2
Abatement Control and Compliance		$4,911.8	$6,174.8	$6,096.1	$11,949.7	$5,853.6
	TOTAL	$9,669.1	$11,254.9	$11,004.1	$19,370.9	$8,366.8
Testing, Technical & Administrative Support						
Salaries & Expenses		$5,243.7	$5,408.3	$5,214.3	$7,434.4	$2,220.1
Abatement Control and Compliance		$964.8	$837.2	$826.7	$850.2	$23.5
	TOTAL	$6,208.5	$6,245.5	$6,041.0	$8,284.6	$2,243.6
Emissions & Fuel Economy Compliance						
Salaries & Expenses		$2,044.3	$1,971.8	$1,900.5	$2,430.1	$529.6
Abatement Control and Compliance		$32.9	$32.7	$32.4	$133.1	$100.7
	TOTAL	$2,077.2	$2,004.5	$1,932.9	$2,563.2	$630.3
TOTAL:						
Salaries & Expenses		$12,045.3	$12,460.2	$12,022.8	$17,285.7	$5,262.9
Abatement Control and Compliance		$5,909.5	$7,044.7	$6,955.2	$12,933.0	$5,977.8
Mobile Source Air Pollution Control & Fuel Economy	TOTAL	$17,954.8	$19,504.9	$18,978.0	$30,218.7	$11,240.7
PERMANENT WORKYEARS						
Emission Standards, Technical Assessment & Characterization		74.5	84.8	83.3	113.3	30.0
Testing, Technical & Administrative Support		92.5	92.9	92.4	94.4	2.0
Emissions & Fuel Economy Compliance		30.1	35.1	33.1	37.1	4.0
TOTAL PERMANENT WORKYEARS		197.1	212.8	208.8	244.8	36.0

AIR
Mobile Source Air Pollution Control & Fuel Economy

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
TOTAL WORKYEARS					
Emission Standards, Technical Assessment & Characterization	84.3	84.8	83.3	113.3	30.0
Testing, Technical & Administrative Support	97.3	92.9	92.4	94.4	2.0
Emissions & Fuel Economy Compliance	33.6	35.1	33.1	37.1	4.0
TOTAL WORKYEARS	215.2	212.8	208.8	244.8	36.0

Mobile Source Air Pollution Control and Fuel Economy

Budget Request

The Agency requests a total of $30,218,700 supported by 244.8 total workyears for 1991, an increase of $11,240,700 and an increase of 36.0 total workyears from 1990. Of the request, $17,285,700 will be for the Salaries and Expenses appropriation and $12,933,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $5,262,900 in the Salaries and Expenses appropriation and an increase of $5,977,800 in the Abatement, Control and Compliance appropriation.

EMISSION STANDARDS, TECHNICAL ASSESSMENT AND CHARACTERIZATION

1991 Program Request

The Agency requests a total of $19,370,900 supported by 113.3 total workyears for this program, of which $7,421,200 will be for the Salaries and Expenses appropriation and $11,949,700 will be for the Abatement, Control and Compliance appropriation. This is an increase of $2,513,200 for the Salaries and Expenses appropriation, an increase of $5,853,600 for the Abatement, Control and Compliance appropriation, and an increase of 30.0 total workyears from 1990. The increases will support additional work related to the use of clean fuels and the implementation of the President's Clean Air Proposal.

In 1991 the mobile source standards program will continue to emphasize control of ozone precursors and air toxics and will begin implementing the aggressive program outlined in proposed Clean Air Act amendments. The emissions impact of clean fuels, such as oxygenated blends and compressed natural gas (CNG) will be investigated. Regulatory work on clean fuels will continue. Work will begin to develop new light-duty and heavy-duty vehicle emissions standards, as mandated by the expected Clean Air Act amendments. Revised light-duty truck hydrocarbon standards consistent with the expected legislative changes will be promulgated. A study of cold weather carbon monoxide (CO) emissions will be completed. Additional testing of in-use vehicles will assess the effectiveness of emission control technologies in controlling carbon monoxide emissions under cold temperature conditions. The Emissions Factor Program will continue to determine emissions from in-use vehicles. A pilot study will continue to assess sampling methodologies and their effectiveness in closing the gaps in data on actual emissions from in-use vehicles.

Additional work will be done to insure the effectiveness of the enhanced vehicle inspection and maintenance programs put into place by state and local jurisdictions. In addition, 15 audits and follow-ups of state and local inspection and maintenance programs will be completed.

1990 Program

In 1990 the Agency is allocating a total of $11,004,100 supported by 83.3 total workyears for this program, of which $4,908,000 is from the Salaries and Expenses appropriation and $6,096,100 is from the Abatement, Control and Compliance appropriation.

In 1990 the standards program is continuing to emphasize control of ozone precursors and air toxics. Work on clean fuels will expand to include emissions characterization and technology assessment for fuels such as compressed natural gas (CNG), alcohol, and propane. The regulatory program is continuing to concentrate on control of excess hydrocarbon emissions, formaldehyde, methanol, and particulates, as well as fuels. Revised light-duty truck hydrocarbon standards are being proposed. The final rule for controlling diesel fuel composition consistent with toxics particulate control will be published. Also, the final rule for heavy-duty emissions banking and trading will be promulgated. Testing of in-use vehicles to develop emission factors will be conducted. A pilot study to assess alternative sampling methodologies for developing in-use emission factors will be undertaken. The objective will be to determine the most effective way to close gaps in data on actual emissions from in-use vehicles. Support to the development of State Implementation Plans is continuing with emphasis on inspection and maintenance programs for in-use vehicles. A total of 15 formal audits and follow-ups of state and local inspection and maintenance programs are being completed.

1989 Accomplishments

In 1989 the Agency obligated a total of $9,669,100 supported by 84.3 total workyears, of which $4,757,300 was from the Salaries and Expenses appropriation and $4,911,800 was from the Abatement, Control and Compliance appropriation.

The program provided implementation assistance and review of State Implementation Plans, particularly vehicle inspection and maintenance programs. In 1989 16 inspection and maintenance program audits were carried out to assess the effectiveness of state and local efforts. A total of 40 vehicle inspection programs now operate in 64 urban areas throughout the country.

In support of the Agency's air toxics control strategy, the regulatory program continued work on control of formaldehyde and particulate matter. Characterization of emissions from vehicles powered by alternative fuels also continued, including promulgation of a rule that set standards and test procedures for methanol-fueled vehicles. With the implementation of lead phasedown, additional work was directed towards alternatives to leaded gasoline. A systematic review of the heavy-duty standards for hydrocarbons, carbon monoxide, and particulate matter continued for potential future revision.

TESTING, TECHNICAL AND ADMINISTRATIVE SUPPORT

1991 Program Request

The Agency requests a total of $8,284,600 supported by 94.4 total workyears for this program, of which $7,434,400 will be for the Salaries and Expenses appropriation and $850,200 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,220,100 in the Salaries and Expenses appropriation, an increase of $23,500 in the Abatement, Control and Compliance appropriation and an increase of 2.0 total workyears from 1990. The increases will support implementation of the President's Clean Air proposal and replacement of obsolete equipment.

This program will provide testing, technical, and administrative support to the operating programs of the Office of Mobile Sources at the Motor Vehicle Emissions Laboratory (MVEL) located in Ann Arbor, Michigan. Approximately 1,000 tests will be performed on prototype vehicles and 1,440 tests on in-use vehicles in support of the emissions factors and recall programs. In addition, 100 tests on new and in-use heavy-duty engines will be conducted to support the implementation and enforcement of the standards for these engines. General activities that will be supported include recall, tampering and fuel switching, standard-setting, emissions characterization, technology assessment, fuel economy, in-use vehicle emissions assessment, and motor vehicle emission certification. The support that will be provided includes: automated data processing (ADP) timesharing services, laboratory data acquisition, and computer operations; testing of motor vehicles to measure emissions and fuel economy; quality assurance and control and correlation services for EPA and industry testing programs; maintenance and engineering design of emission testing equipment; and personnel, administrative, safety, environmental compliance, and facilities support services. Testing and analysis of approximately 12,000 fuel samples collected for enforcement purposes (including volatility control) will continue.

1990 Program

In 1990 the Agency is allocating a total of $6,041,000 supported by 92.4 total workyears for this program, of which $5,214,300 is from the Salaries and Expenses appropriation and $826,700 is from the Abatement, Control and Compliance appropriation.

The 1990 program continues to focus on increasing the efficiency of the testing, technical, and administrative support operations while maintaining or expanding the quality and quantity of outputs.

Testing support to the certification, fuel economy, and in-use compliance and assessment programs continues with a total of approximately 2,440 tests scheduled for these programs in 1990. Testing activities supported at the MVEL range from performing standard, well-established engineering tests to the development and performance of new test procedures to accommodate new program needs or changing technology.

Routine testing and analysis of 12,000 fuel samples collected in the field for enforcing fuels regulations continues. Correlation programs to maintain equivalent test procedures between manufacturers and EPA continue. Test equipment maintenance, calibration, and repair services are being provided. The adequacy of existing procedures and equipment to test newer technology vehicles is being evaluated. If necessary, new equipment and procedures will be designed. In addition, personnel, facility support services, safety, ADP, and administrative management functions are provided at the MVEL.

1989 Accomplishments

In 1989 the Agency obligated a total of $6,208,500 supported by 97.3 total workyears for this program, of which $5,243,700 was from the Salaries and Expenses appropriation and $964,800 was from the Abatement, Control and Compliance appropriation.

In 1989 a total of 850 tests were conducted for certification, fuel economy labeling, and compliance programs. The MVEL performed 1600 tests on in-use vehicles in support of the recall, surveillance, and tampering/fuel switching programs; the development of emission factors; and the assessment of the effectiveness of new emissions control technology in maintaining the emission standards in use. Routine testing and analysis of 12,500 fuel samples collected in the field were performed in 1989 to enforce vehicle fuel regulations, including the newly implemented fuel volatility standards.

Basic personnel and administrative management functions, including ADP management, were provided. Also, safety and facility services, aimed at maintaining a high level of occupational safety and health, were provided.

EMISSIONS AND FUEL ECONOMY COMPLIANCE

1991 Program Request

The Agency requests a total of $2,563,200 supported by 37.1 total workyears for this program, of which $2,430,100 will be for the Salaries and Expenses appropriation and $133,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $529,600 in the Salaries and Expenses appropriation, an increase of $100,700 in the Abatement, Control and Compliance appropriation, and an increase of 4.0 total workyears. The increases will support implementation of the President's Clean Air proposal and the development of mobile source fees.

The emissions certification program will continue to assess the validity of applications for certification of approximately 100 original equipment manufacturers of light-duty vehicles, heavy-duty engines, and motorcycles. Participation in the certification program by importers reselling vehicles is expected to stabilize in 1991. Approximately 40 certificate holders will be bringing non-conforming imports into compliance.

In 1991 the in-use assessment program will continue to focus on the effectiveness of onboard diagnostic systems in identifying component failure. Rules to standardize such systems will be promulgated. Work will continue on suspected problems with manufacturers' alleged use of defeat devices and more testing will be done under non-Federal Test Procedure conditions to assess the degree to which emission control devices control emissions only on the standard test cycle and do not do so in actual on-road use. Changes in certification resulting from volatility controls will be implemented. The mobile source fee regulation will be implemented.

The statutory fuel economy information program will be carried out, with the provision of 1,000 labels, 50 Corporate Average Fuel Economy (CAFE) calculations, and data for the Gas Mileage Guide. Revised CAFE and fuel economy labeling rules required by the Alternative Motor Fuels Act (AMFA) will be published. Guidance to manufacturers on implementing the changes required by these revisions will be provided.

1990 Program

In 1990 the Agency is allocating a total of $1,932,900 supported by 33.1 total workyears for this program, of which $1,900,500 is from the Salaries and Expenses appropriation and $32,400 is from the Abatement, Control and Compliance appropriation.

The emissions certification program is continuing to issue certificates of compliance to approximately 100 original equipment manufacturers of light-duty vehicles, heavy-duty engines, and motorcycles. Participation in the certification program by importers reselling vehicles will continue. Streamlined procedures for handling these new certificate holders will be promulgated. In 1990 the in-use program is placing emphasis on assessment of emission control diagnostic systems and their effectiveness in isolating emission control component failure. A rule to standardize these systems will be proposed. Work is also focusing on suspected problems with manufacturers' use of defeat devices, as well as on emissions under conditions different from the Federal Test Procedure. This additional engineering analysis will help assess the degree to which emission control devices differ relative to the standard test cycle versus actual on-road operational conditions. Work on a rule to implement the mobile source fees program will begin.

The statutory fuel economy information program is being carried out, with 1,000 labels, 50 CAFE calculations, and data for the Gas Mileage Guide being produced. Revised CAFE and fuel economy labeling rules required by AMFA will be proposed.

1989 Accomplishments

In 1989 the Agency obligated a total of $2,077,200 supported by 33.6 total workyears for this program, of which $2,044,300 was from the Salaries and Expenses appropriation and $32,900 was from the Abatement, Control and Compliance appropriation.

The emissions certification program issued certificates of compliance to approximately 100 original equipment manufacturers of light-duty vehicles, heavy-duty engines, and motorcycles. Participation in the certification program by importers reselling vehicles continued to increase. EPA issued 26 certificates of conformity to Independent Commercial Importers (ICI).

Certification engineering review continued to deter the production of vehicle designs incapable of meeting emission standards. A regulation for aftermarket parts certification was proposed. The fuel economy program generated 1,038 fuel economy labels, verified 41 CAFE calculations, and compiled data for the *Gas Mileage Guide*. The in-use technology assessment program examined the feasibility and reliability of onboard diagnostic systems in identifying emission control component failure.

AIR
State Programs Resource Assistance

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Control Agency Resource Supplementation (Section 105 Grants)						
Abatement Control and Compliance		$101,478.5	$100,467.2	$99,181.4	$137,700.0	$38,518.6
	TOTAL	$101,478.5	$100,467.2	$99,181.4	$137,700.0	$38,518.6
Training						
Salaries & Expenses		$269.0	$255.2	$251.8	$262.0	$10.2
	TOTAL	$269.0	$255.2	$251.8	$262.0	$10.2
TOTAL:						
Salaries & Expenses		$269.0	$255.2	$251.8	$262.0	$10.2
Abatement Control and Compliance		$101,478.5	$100,467.2	$99,181.4	$137,700.0	$38,518.6
State Programs Resource Assistance	TOTAL	$101,747.5	$100,722.4	$99,433.2	$137,962.0	$38,528.8
PERMANENT WORKYEARS						
Training		4.0	4.0	4.0	4.0	0.0
TOTAL PERMANENT WORKYEARS		4.0	4.0	4.0	4.0	0.0
TOTAL WORKYEARS						
Training		4.2	4.0	4.0	4.0	0.0
TOTAL WORKYEARS		4.2	4.0	4.0	4.0	0.0

AIR

State Programs Resource Assistance

Budget Request

The Agency requests a total of $137,962,000 supported by 4.0 total workyears for 1991, an increase of $38,528,800 and no change in total workyears from 1990. Of the request, $262,000 will be for the Salaries and Expenses appropriation and $137,700,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase in the Salaries and Expenses appropriation of $10,200 and an increase the Abatement, Control and Compliance appropriation of $38,518,600

CONTROL AGENCY RESOURCE SUPPLEMENTATION

1991 Program Request

The Agency requests a total of $137,700,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $38,518,600 to support the requirements of the President's Clean Air proposal for acid deposition, air toxics, operating permits, and NAAQSs nonattainment.

In 1991 states will continue to have major responsibility for implementation of programs to attain National Ambient Air Quality Standards (NAAQSs) for ozone and carbon monoxide (CO). Deficiencies in existing state and local stationary and mobile source control programs will be corrected, ongoing programs will be reviewed for effectiveness, monitoring and compliance programs will be continued, and State Implementation Plans (SIPs) will be initiated for those areas not in attainment. To prepare attainment plans, states must complete their efforts to develop and update ozone/CO emissions inventories with a focus on correcting deficiencies in baseline inventories and performing quality assurance on the data prior to formal submission. States will also analyze long-range transport issues, evaluate and select alternative control measures for stationary and mobile sources, and develop vehicle inspection and maintenance (I/M) strategies.

The Agency will support the following expanded activities needed to implement anticipated new Clean Air legislation: upgrade, operate, and quality control monitoring networks for ozone, CO, NO_x, and nonmethane organic compounds (NMOCs); increase inspection and enforcement actions to implement existing requirements; review program effectiveness and improve emission inventories; correct new source review programs; develop and adopt SIPs to include required provisions such as reasonably available control technology (RACT); I/M from Part D and enhanced I/M; Stage II; and reasonable further progress.

In addition to Group I SIPs for size-specific particulate matter (PM-10), states will continue to develop SIPs in any Group II or III areas which show monitored air quality violations. In addition, states will develop SIP revisions that will replace prevention of significant deterioration (PSD) increments for total suspended particulate (TSP) with increments for PM-10. Expanded support will be provided for enforcement of existing requirements, modeling and control strategy demonstrations, and correction of new source review programs.

Air toxics control programs will continue and additional support will be provided to enable state and local agencies to implement the requirements of the President's Clean Air proposal, particularly alternative compliance exemptions which can only be issued by state and local agencies having EPA-approved permit programs. States will continue to submit sulfur dioxide (SO_2) SIP revisions for individual sources. State efforts on operating permits will focus on securing legislative authority for permit programs, fees, or submission of fees to the air pollution program. Expanded support in the area of acid deposition will allow all states having phase I sources to interact with EPA as the Agency develops phase I requirements. This will help ensure that these requirements are consistent with state regulations and will facilitate state assumption of phase II responsibilities. The Agency will continue to issue permits for new sources and support air pollution control activities on Indian lands. States will also conduct additional inspections and enforcement actions for asbestos demolition and renovation (D&R). State and local government efforts to build their capacity to identify and solve indoor air quality problems will be supported. Resources will continue to be used to support the provision of specialized training for persons involved in air pollution control at the state and local level.

In 1991 states will continue to carry out activities essential to the operation and maintenance of effective air pollution regulatory programs. These include the implementation of source surveillance and compliance programs aimed at assuring initial and continuous compliance by stationary sources subject to SIP requirements, New Source Performance Standards (NSPSs), and National Emission Standards for Hazardous Air Pollutants (NESHAPs). States will operate the state and local air monitoring system (SLAMS) networks, maintain quality assurance programs, and provide data on air quality levels, trends, and attainment status. States will continue to assume responsibility for the implementation of newly promulgated NSPSs and for the review and permitting of new sources, including those to which PSD requirements apply.

1990 Program

In 1990 the Agency is allocating a total of $99,181,400, all of which is from the Abatement, Control and Compliance appropriation.

In 1990 a major focus of the control agency support program is the implementation of post-1987 attainment requirements for ozone and CO. States will continue efforts initiated in 1989 for correcting and modifying existing regulations, control measures, programs, and procedures. These include efforts to expand the inspection and improve the compliance of Class A and B volatile organic compound (VOC) sources. A major initiative to prepare base year emissions inventories for ozone and CO nonattainment areas will continue with emphasis on quality assurance, review, and revision. States are working on revisions to their SIPs required by EPA's May 1988 SIP calls and additional SIP calls of November 1989. States are also analyzing the effectiveness of current VOC control programs in order to correct these programs if necessary. Efforts within the Northeast and Middle Atlantic states to apply the regional ozone model to identify transport and assess control options over large areas continue. Major efforts are under way to develop other data bases such as NMOC data needed for attainment demonstration modeling. Efforts to develop projection year inventories will be initiated during 1990.

State and local agencies are continuing to implement various elements of their multi-year plans for building and implementing programs for assessing and reducing exposure to air toxics. States are continuing to prepare required PM-10 SIPs for Group I areas. In addition, states are performing necessary analyses and preparing SIPs for Group II areas where nonattainment problems have been identified. Programs to establish the required PM-10 ambient monitoring network will be completed. States continue to operate (SO_2) monitoring networks and inspect major SO_2 sources. State PSD and new source review (NSR) programs are also continuing.

States are also carrying out inspection and source monitoring programs for assuring initial and continuous compliance by all major stationary sources, including timely and appropriate responses to violations. Emphasis continues on identifying contractors that violate the asbestos D&R regulations and taking appropriate follow-up action. In addition, states are continuing to fully operate and monitor the quality of the National Air Monitoring System (NAMS) and SLAMS networks and to assume responsibility for newly promulgated NSPSs and NESHAPs.

Support for three special projects is continued from 1989. These projects are: (1) Northeast ozone and visibility studies for coordinated air use management and continued interstate coordination on ozone nonattainment and air quality; (2) an international emissions monitoring study in the El Paso/Juarez airshed; and (3) the San Joaquin Valley ozone modeling effort. In addition, support is being provided for specialized training of persons involved in air pollution control at the state and local level.

1989 Accomplishments

In 1989 the Agency obligated a total of $101,478,500, all of which was from the Abatement, Control and Compliance appropriation.

In 1989 much of the control agency support program focused on the implementation of the post-1987 attainment requirements for ozone/CO. States worked on revisions to their SIPs required by EPA's May 1988 SIP call. Efforts initiated in 1988 for correcting and modifying existing RACT regulations and other control measures for VOCs continued. The preparation of base year emissions inventories for ozone and CO nonattainment areas commenced in 1989 and the collection of NMOC data continued. States also began to analyze the effectiveness of current VOC control programs in order to determine the need to modify these programs. Efforts to expand the Class A and B VOC source inspection program and the compliance level of these sources continued. Efforts to identify multi-day transport and assess control options over large areas continued in the Northeast and Middle Atlantic states.

States continued to prepare required PM-10 SIPs for Group I areas. States also performed analyses and prepared SIPs for Group II areas where nonattainment problems were identified. Work continued on establishing the PM-10 ambient monitoring network. States continued to operate SO_2 monitoring networks and inspect major SO_2 sources. State and local agencies continued to implement various elements of their multi-year development plans for building and implementing programs for assessing and reducing exposure to air toxics. State and local agencies worked to identify and integrate air toxics considerations into current regulatory programs for both ozone and PM-10.

States continued to carry out source inspection and monitoring programs to assure both initial and continuous compliance by major stationary sources. States continued to identify contractors that violated the asbestos D&R regulations and took appropriate follow-up actions. States also continued to operate and monitor the quality of NAMS/SLAMS networks and to assume responsibility for implementing NSPSs and NESHAPs.

Resources to support specialized training for state/local personnel involved in abatement and control activities were made available in 1989. In addition, the following four special projects were supported in 1989: (1) Northeast ozone and visibility studies for coordinated air use management and continued interstate coordination on ozone nonattainment and air quality; (2) an international emissions monitoring study in the El Paso/Juarez airshed for ozone/CO and PM-10; (3) application of the urban airshed model for the San Joaquin Valley; and (4) data analyses of emissions data from the high-altitude automobile emissions testing program in Denver.

TRAINING

1991 Program Request

The Agency requests a total of $262,000 supported by 4.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $10,200 for the Salaries and Expenses appropriation, and no change in total workyears from 1990.

In 1991 the Agency will continue to manage its program of training persons involved in air pollution control at the state and local level. The program will continue to develop, update, and revise short courses. In addition, self-instructional training will be provided to persons involved in abatement and air pollution control at the state and local level. Technical support will be provided to states and Regions which provide funding for planning specialty workshops and training courses.

1990 Program

In 1990 the Agency is allocating a total of $251,800 supported by 4.0 total workyears to this program, all of which is from the Salaries and Expenses appropriation.

In 1990 the Agency is managing the development, revision, and delivery of short courses and self-instructional materials with major emphasis on the development of training courses in the areas of PM-10, ozone/CO, and permitting.

The Agency is also providing technical support to states and Regions planning workshops and training courses. In addition, existing courses are being updated as a result of regulatory changes.

1989 Accomplishments

In 1989 the Agency obligated a total of $269,000 supported by 4.2 total workyears, all of which was from the Salaries and Expenses appropriation.

In 1989 self-instructional training to persons involved in air pollution control at the state and local level was provided and approximately 35 short courses were presented throughout the country. Existing courses were updated and new courses were developed.

AIR
Air Quality Management Implementation

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PROGRAM					
Air Quality Management Implementation					
Salaries & Expenses	$12,556.1	$12,763.8	$13,309.5	$15,861.6	$2,552.1
Abatement Control and Compliance	$368.9	$2,870.8	$2,831.6	$322.9	-$2,508.7
TOTAL	$12,925.0	$15,634.6	$16,141.1	$16,184.5	$43.4
TOTAL:					
Salaries & Expenses	$12,556.1	$12,763.8	$13,309.5	$15,861.6	$2,552.1
Abatement Control and Compliance	$368.9	$2,870.8	$2,831.6	$322.9	-$2,508.7
Air Quality Management Implementation TOTAL	$12,925.0	$15,634.6	$16,141.1	$16,184.5	$43.4
PERMANENT WORKYEARS					
Air Quality Management Implementation	258.2	288.7	272.8	325.7	52.9
TOTAL PERMANENT WORKYEARS	258.2	288.7	272.8	325.7	52.9
TOTAL WORKYEARS					
Air Quality Management Implementation	273.3	288.7	288.0	325.7	37.7
TOTAL WORKYEARS	273.3	288.7	288.0	325.7	37.7

Air Quality Management Implementation

Budget Request

The Agency requests a total of $16,184,500 supported by 325.7 total workyears for 1991, an increase of $43,400 and 37.7 total workyears from 1990. Of the request, $15,861,600 will be for the Salaries and Expenses appropriation and $322,900 will be for the Abatement, Control and Compliance appropriation. This represents an increase in the Salaries and Expenses appropriation of $2,552,100 and a decrease in the Abatement, Control and Compliance appropriation of $2,508,700.

AIR QUALITY MANAGEMENT IMPLEMENTATION

1991 Program Request

The Agency requests a total of $16,184,500 supported by 325.7 total workyears for this program, of which $15,861,600 will be for the Salaries and Expenses appropriation and $322,900 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,552,100 for the Salaries and Expenses appropriation, a decrease of $2,508,700 in the Abatement, Control and Compliance appropriation, and an increase of 37.7 in total workyears from 1990. The increases reflect support for the requirements of the President's Clean Air proposal for acid deposition, air toxics, operating permits, and nonattainment. The decrease in the Abatement, Control and Compliance appropriation represents completion of funding for selected special projects.

In 1991 the ten EPA Regional Offices will continue to implement measures to attain National Ambient Air Quality Standards (NAAQSs) for ozone and carbon monoxide (CO). The Agency will provide guidance to states in a number of areas including the development of emissions inventories, correction of existing stationary and mobile source regulations and programs, procedures and techniques for determining required emission reductions, evaluating and selecting control measures, and preparing attainment demonstrations. Ongoing control programs will be reviewed for effectiveness. State Implementation Plans (SIPs) will be reviewed as they are submitted and rulemakings will be initiated. Regional Offices will provide expanded guidance and assistance to the states for the following activities: classification of ozone/CO non-attainment areas, new source review (NSR) corrections, application of reasonably available control technology (RACT) measures, Stage II implementation, and implementation of the oxygenated fuels program. Regions will also track the implementation of SIPs and support states as they enforce rules to limit the volatility of gasoline. In addition, Regions will provide coordination of control agencies to ensure correction of identified deficiencies in draft inventories prior to their formal submission. Regions will expand their efforts to provide emission inventory guidance to states for volatile organic compounds (VOCs) and assistance in refining base year inventories, tracking progress requirements, and preparing projection and attainment year inventories.

Regions will continue to provide guidance to states on the development and submission of State Implementation Plans (SIPs) to implement the NAAQSs for size specific particulate matter (PM-10). PM-10 SIPs will be reviewed as they are submitted and rulemaking is initiated. The Regions will assist states in developing SIP revisions that will replace prevention of significant deterioration (PSD) increments for total suspended particulates with increments for PM-10. Efforts associated with the development of PM-10 Federal Implementation Plans (FIPs) will continue consistent with requirements of litigation and new legislation. Regions will provide expanded support to states in the development of NSR corrections.

State and local programs to control air toxics will be supported. Sulfur dioxide (SO_2) SIP revisions will be reviewed as they are submitted. A number of other ongoing air quality management activities will be continued including review and oversight of the air grants process, implementation of the national air audit system, support to litigation activities, and support to state NSR/PSD programs. New efforts in the Regions in the area of operating permits will focus on assisting states without legislative authority to secure such legislative changes for permit programs, fees, or submission of fees to the air pollution program.

1990 Program

In 1990 the Agency is allocating a total of $16,141,100 supported by 288.0 total workyears to this program, of which $13,309,500 is from the Salaries and Expenses appropriation and $2,831,600 is from the Abatement, Control and Compliance appropriation.

A major focus of the Regional air quality management program is the implementation of the post-1987 requirements for correcting ozone and CO nonattainment problems. The efforts to correct and improve inventories and existing regulations, control measures, programs, and procedures extend into 1990. Regions will provide detailed assistance to those areas with the most serious problems to complete the required revisions to the SIPs on schedule. Regions will review state-submitted SIP revisions and will initiate appropriate rulemaking. Considerable effort will be expended on development of court-mandated FIPs in the areas of ozone/CO and PM-10. Follow-on analyses for the Regional ozone model in the Northeast and Middle Atlantic states will be undertaken.

Ongoing implementation of other air quality management programs include: (1) reviewing and taking rulemaking action on state-submitted SIP revisions for PM-10, (2) assisting state and local agencies in implementing their multi-year development plans for improving and carrying out air toxics control programs, (3) reviewing and taking rulemaking action on state-initiated SO_2 SIP revisions, and (4) performing other functions such as managing the air grants process, selective implementation of the National Air Audit System, and assisting states in the implementation of the programs for PSD, including development of nitrogen dioxide (NO_2) PSD increments and NSR.

In 1990 support is provided for the following special projects: (1) development of the urban airshed model to support a FIP for the Chicago area; (2) a three-year environmental health study in Louisiana to identify priorities for controlling and correcting environmental pollution problems; (3) a Sacramento ozone modeling effort in support of a FIP; and (4) an alternative fuels options demonstration project in the South Coast Air Quality District.

1989 Accomplishments

In 1989 the Agency obligated a total of $12,925,000 supported by 273.3 total workyears, of which $12,556,100 was from the Salaries and Expenses appropriation and $368,900 was from the Abatement, Control and Compliance appropriation.

In 1989 one of the major priorities of the Regional air quality management program was implementation of post-1987 requirements for correcting ozone and CO nonattainment area problems. The Regional Offices continued to work with state and local agencies to correct and improve existing regulations, control measures, and overall program effectiveness. Work on the regional ozone model in the Northeast and Middle Atlantic states continued with the completion of monitoring activities and data base development.

The Regions also reviewed, processed, and took rulemaking actions on state-submitted SIP revisions for PM-10 and for SO_2. The SIP reform process was implemented by the Regions and resulted in a significant number of "backlog" SIP revisions being processed in 1989. Assistance was provided to state and local agencies for implementing multi-year development plans for improving air toxics programs. The Regions also continued to manage the air programs grant process and assist states in the implementation of the PSD and NSR programs. Considerable effort was expended on development of court-mandated FIPs for ozone/CO nonattainment areas and negotiation of FIP settlements in Illinois and Utah.

AIR
Trends Monitoring & Progress Assessment

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PROGRAM					
Ambient Air Quality Monitoring					
Salaries & Expenses	$3,769.5	$3,978.8	$3,860.9	$4,455.9	$595.0
Abatement Control and Compliance	$301.9	$118.9	$116.5	$122.8	$6.3
TOTAL	$4,071.4	$4,097.7	$3,977.4	$4,578.7	$601.3
Air Quality & Emissions Data Management & Analysis					
Salaries & Expenses	$4,366.5	$4,401.1	$4,279.8	$6,026.0	$1,746.2
Abatement Control and Compliance	$4,006.7	$6,354.7	$6,273.6	$10,269.4	$3,995.8
TOTAL	$8,373.2	$10,755.8	$10,553.4	$16,295.4	$5,742.0
TOTAL:					
Salaries & Expenses	$8,136.0	$8,379.9	$8,140.7	$10,481.9	$2,341.2
Abatement Control and Compliance	$4,308.6	$6,473.6	$6,390.1	$10,392.2	$4,002.1
Trends Monitoring & Progress Assessment TOTAL	$12,444.6	$14,853.5	$14,530.8	$20,874.1	$6,343.3
PERMANENT WORKYEARS					
Ambient Air Quality Monitoring	78.2	86.2	82.4	86.2	3.8
Air Quality & Emissions Data Management & Analysis	79.1	80.5	79.0	92.0	13.0
TOTAL PERMANENT WORKYEARS	157.3	166.7	161.4	178.2	16.8
TOTAL WORKYEARS					
Ambient Air Quality Monitoring	83.0	86.2	86.1	86.2	.1
Air Quality & Emissions Data Management & Analysis	81.0	80.5	79.0	92.0	13.0
TOTAL WORKYEARS	164.0	166.7	165.1	178.2	13.1

Trends Monitoring and Progress Assessment

Budget Request

The Agency requests a total of $20,874,100 supported by 178.2 total workyears for 1991, an increase of $6,343,300 and 13.1 total workyears from 1990. Of the request, $10,481,900 will be for the Salaries and Expenses appropriation and $10,392,200 will be for the Abatement, Control and Compliance appropriation. This represents an increase in the Salaries and Expenses appropriation of $2,341,200 and an increase of $4,002,100 in the Abatement, Control and Compliance appropriation.

AMBIENT AIR QUALITY MONITORING

1991 Program Request

The Agency requests a total of $4,578,700 supported by 86.2 total workyears for this program, of which $4,455,900 will be for the Salaries and Expenses appropriation and $122,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $595,000 for the Salaries and Expenses appropriation, an increase of $6,300 in the Abatement, Control and Compliance appropriation, and an increase of 0.1 in total workyears from 1990. The increase in the Salaries and Expenses appropriation will support increased personnel costs and upgrading the capacity of EPA Regional laboratories.

In 1991 the ten EPA Regional Offices will continue overview and management of state air monitoring programs including grants review, coordination of emission and air quality data bases, and validation of data from the National Air Monitoring System (NAMS) and the State and Local Air Monitoring System (SLAMS) data base. Data analyses including air quality trend information will be developed as input to the Regional Trend Reports.

In the area of quality assurance, significant resources will be used for on-site systems audits of state networks and monitors. In addition, the Regional laboratories will continue to participate in the national air audit program. Size-specific particulate matter (PM-10) monitors established or moved during 1990 will require review and site visits to verify compliance with EPA air monitoring regulations. Reviews of PM-10 ambient data and sampling frequency will be performed and will include data critical to classification determinations and identification of possible control strategies.

Regional Office implementation of the Toxics Air Monitoring System (TAMS) network will involve coordinating operational improvements with the Office of Research and Development and state and local agencies. Resources will also be used to provide monitoring/quality assurance support and technical assistance to states in evaluating the source impact of specific toxic air pollutants from sources considered for regulation under state control programs. Support for state and local toxics efforts in urban areas will continue with management, coordination, and technical assistance provided to complete or refine toxics emission data bases and to improve state and local ambient monitoring capabilities.

Technical oversight and support will be provided to state and local programs developing data bases needed to prepare State Implementation Plans (SIPs). This will include data bases for 101 ozone areas and 44 carbon monoxide (CO) areas, as well as for additional areas that exceed National Ambient Air Quality Standards (NAAQSs) in 1989 or 1990. This effort will include limited coordination of the periodic nonmethane organic compounds/nitrogen oxides sampling programs. Oversight of revisions to the CO and ozone ambient networks will continue with emphasis on evaluating networks for newly identified nonattainment areas and implementing corrective actions. The Regions will continue to provide quality assurance support to Indian tribal units and to assist in developing ambient monitoring programs.

1990 Program

In 1990 the Agency is allocating a total of $3,977,400 supported by 86.1 total workyears to this program, of which $3,860,900 is from the Salaries and Expenses appropriation and $116,500 is from the Abatement, Control and Compliance appropriation.

In 1990 TAMS is being operated at two sites in Boston and two sites in Houston. The Regions are continuing to work with states in identifying and eliminating air monitoring sites that have marginal utility and in implementing changes needed to adequately monitor all areas where revised SIPs for ozone and CO are being prepared. To support the development of post-1987 ozone/CO SIPs, Regional Office efforts to improve the quality and timeliness of ambient and emission data bases are continuing.

The Regions are continuing their programs of on-site visits to review and audit NAMS monitors and a small percentage of SLAMS monitors and to review laboratories for proper operating and quality assurance procedures. The validation, management, and coordination of state and local air quality and emission data bases before they are submitted to EPA's central data bank are continuing. Quality assurance activities and state audits are continuing and participation in the National Air Audit System (NAAS) is also continuing.

The Regions will continue to have active roles in overseeing State and local sampling networks for PM-10 established in 1988 and 1989. As part of their oversight of ongoing PM-10 sampling programs the Regions are active in reviewing and interpreting ambient data and in coordinating state adjustments to sampling frequency at sites that exceed PM-10 NAAQS. The Regions are also involved in preparing and validating ambient data bases needed to implement the initial nonattainment designations required under pending revisions to the Clean Air Act. The Regions will also continue to provide quality assurance support to Indian tribal units and to assist in developing ambient monitoring programs.

1989 Accomplishments

In 1989 the Agency obligated a total of $4,071,400 supported by 83.0 total workyears, of which $3,769,500 was from the Salaries and Expenses appropriation and $301,900 was from the Abatement, Control and Compliance appropriation.

In 1989 the Regional Offices coordinated the collection, validation, and submission of ambient data necessary to support EPA actions calling for revised SIPs for ozone and CO. In addition, the Regions assisted states in implementing network plans for ambient monitoring of PM-10 and developing quality assurance plans necessary to meet EPA requirements. On-site audits of 300 monitors were conducted including 45 proposed or newly established PM-10 sites. The Regions also assisted 62 state and local agencies in assessing potential risks from toxic pollutants through ambient sampling and 51 agencies in developing emission inventories.

AIR QUALITY AND EMISSION DATA MANAGEMENT AND ANALYSIS

1991 Program Request

The Agency requests a total of $16,295,400 supported by 92.0 total workyears for this program, of which $6,026,000 will be for the Salaries and Expenses appropriation and $10,269,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,746,200 for the Salaries and Expenses appropriation, an increase of $3,995,800 in the Abatement, Control and Compliance appropriation, and an increase of 13.0 workyears from 1990. The increases reflect support for the requirements of the President's Clean Air proposal for air toxics and NAAQSs nonattainment.

Both of the Aerometric Information Retrieval System (AIRS) Subsystems will be maintained and guidance will be provided to users. A total of 12 to 15 additional states will be provided with access to the Facility Subsystem. New software to support high priority reports and analyses will be implemented for both Subsystems. Additional AIRS software to track, summarize, and display air quality and emission data relating to ozone and CO regulatory programs will be developed.

Efforts to develop improved methods for compiling emissions inventories will continue as will efforts to develop and issue PM-10 emission factors for significant sources of particulates. Support of Headquarters, Regional Office, and state and local modeling of both NAAQS and toxics pollutants will continue as will on-going efforts to evaluate model accuracy and provide refined models and guidance. Implementation of the Agency's toxic monitoring strategy will continue. Emission testing support will continue and include technical support to state and local agencies. The program will also continue to prepare analyses of ambient and emission trends, issue status and trends reports and provide national oversight of SIP ambient monitoring.

Technical support to the ozone/CO program will continue. New or slightly expanded support will be provided in four critical areas: (1) Development of a new system for storing, retrieving, and analyzing emissions inventory data on smaller (area) sources. This will complement related EPA capabilities for handling inventory data from large (point) sources and will be a major module of AIRS. (2) Provision of ambient monitoring guidance and support to facilitate the correction of deficiencies in current networks, the establishment of long-term networks for sampling ozone precursors, and the implementation of enhanced networks in newly identified areas. (3) Development of technical guidance for the future application of urban grid models, provision of technical and operational support to State and local modeling efforts for both CO and ozone areas, and initiation of work on long-term application of regional oxidant models in three regions. (4) Initiation of programs for managing, tracking, and quality assuring emission inventory data including data quality reviews of SIP inventories for national consistency. Also, efforts will be initiated to develop prescriptive requirements for preparing point and area source inventories.

The Agency will provide expanded air toxics support in four areas: (1) Development of emission test methods for maximum achievable control technology (MACT) standards to be issued within two and four years of enactment of expected legislative changes; (2) Provision of technical support to states on test method application; (3) Development of emission factors to support state implementation of toxics programs; and (4) Conduct of dispersion analyses for proposed MACT standards and to assist in developing guidance for demonstrating alternative compliance.

1990 Program

In 1990 the Agency is allocating a total of $10,553,400 supported by 79.0 total workyears to this program, of which $4,279,800 is from the Salaries and Expenses appropriation and $6,273,600 is from the Abatement, Control and Compliance appropriation.

In 1990 priority is given to four areas: (1) Providing active support to the ten EPA Regional Offices and to an expanding number of state users of the Air Quality Subsystem of AIRS; (2) Providing training, documentation, and access to the AIRS Facility Subsystem to the Regions and 20-24 states; (3) Providing guidance and consultation on techniques required to assess attainment of the NAAQSs for PM-10, revising ambient networks and sampling frequencies, applying models for SIP analyses and developing and applying emission factors to the PM-10 SIP inventories; and (4) To broadly support Regional Office and state efforts relating to future ozone and CO SIP revisions including the review of ambient networks, the development of specialized software to summarize and display air quality and emission data; guidance for preparing, submitting, and revising draft emission inventories; assistance in preparing data bases and applying grid and statistical models; and completion of the multi-year project to assess the regional transport of ozone and precursors in the Northeast and Middle Atlantic states.

Technical analyses to support reviews of the NAAQSs for ozone and lead will continue. The air toxics program includes continued implementation of the ambient monitoring strategy with oversight of the TAMS network in two cities and analyses of ambient levels for selected toxic compounds. Guidance will be issued to support SIP inventories for PM-10 and ozone/CO including the development of new factors for six PM-10 source categories. Reviews of draft ozone/CO inventories will be performed and support will be provided to Regional Offices for deficiency correction. Guidance will be furnished to Regions and state and local agencies on applying models to provide screening estimates of air quality for toxic pollutants. The evaluation and refinement of dispersion models continues as does support and guidance on model application for all NAAQS pollutants and for those pollutants under assessment for possible regulation. Efforts to develop improved inventory methodologies and to prepare design specifications for the AIRS Area Source Subsystem are continuing. Emission testing support will be provided to Headquarters offices responsible for developing or revising emission standards and an information center will be operated to provide technical support to state and local agencies in applying test methods used in SIP compliance and for non-routine tests. The program is continuing to analyze ambient and emission trends for NAAQS pollutants, prepare various status and trends reports, and provide national oversight of SIP ambient monitoring.

1989 Accomplishments

In 1989 the Agency obligated a total of $8,373,200 supported by 81.0 total workyears, of which $4,366,500 was from the Salaries and Expenses appropriation and $4,006,700 was from the Abatement, Control and Compliance appropriation.

In 1989 comprehensive user support and enhanced software was provided to over 40 agencies using the AIRS Air Quality System. Other significant AIRS activities included the completion and testing of the initial software for the Facility Subsystem, the addition of 14 states to the Air Quality Subsystem user community, and substantial progress in documenting requirements for the new AIRS Area Source System. Guidance was issued and workshops were held to structure the preparation of baseline ozone and CO inventories. Software was developed and issued to facilitate submission and quality assurance of these draft inventories. Other major activities included: development of data bases and simulation of base case strategies for a project to apply EPA's Regional Oxidant Model to the Northeast and Middle Atlantic states; publication of the Air Quality and Emissions Trend Report for 1987; providing technical support to the Regional Offices and states on application of emission factors for PM-10 and other pollutants; application of urban grid models for ozone to five cities; and the initiation of a new center to provide technical support to state and local agencies in applying emission test methods.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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AIR
Stationary Source Enforcement

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Stationary Source Compliance					
Salaries & Expenses	$12,819.5	$13,550.5	$13,722.9	$18,617.0	$4,894.1
Abatement Control and Compliance	$2,938.4	$4,405.8	$4,349.6	$6,525.7	$2,176.1
TOTAL	$15,757.9	$17,956.3	$18,072.5	$25,142.7	$7,070.2
TOTAL:					
Salaries & Expenses	$12,819.5	$13,550.5	$13,722.9	$18,617.0	$4,894.1
Abatement Control and Compliance	$2,938.4	$4,405.8	$4,349.6	$6,525.7	$2,176.1
Stationary Source Enforcement TOTAL	$15,757.9	$17,956.3	$18,072.5	$25,142.7	$7,070.2
PERMANENT WORKYEARS					
Stationary Source Compliance	280.4	311.8	294.4	362.0	67.6
TOTAL PERMANENT WORKYEARS	280.4	311.8	294.4	362.0	67.6
TOTAL WORKYEARS					
Stationary Source Compliance	294.2	311.8	310.6	362.0	51.4
TOTAL WORKYEARS	294.2	311.8	310.6	362.0	51.4

Stationary Source Enforcement

Budget Request

The Agency requests a total of $25,142,700 supported by 362.0 total workyears for 1991, an increase of $7,070,200 and 51.4 total workyears from 1990. Of the request, $18,617,000 will be for the Salaries and Expenses appropriation and $6,525,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $4,894,100 in the Salaries and Expenses appropriation and an increase of $2,176,100 in the Abatement, Control and Compliance appropriation.

STATIONARY SOURCE ENFORCEMENT

1991 Program Request

The Agency requests a total of $25,142,700 supported by 362.0 total workyears for this program, of which $18,617,000 will be for the Salaries and Expenses appropriation and $6,525,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $4,894,100 for the Salaries and Expenses appropriation, an increase of $2,176,100 for the Abatement, Control and Compliance appropriation, and an increase of 51.4 in total workyears from 1990. The increase will help initiate implementation of the requirements of the President's Clean Air proposal for air toxics, acid deposition, and administrative enforcement. The increase will also help support implementation of strategies for three National Emission Standards for Hazardous Air Pollutants (NESHAPs): benzene, radionuclides, and asbestos demolition and renovation (D&R), as well as enhancing the program for certification of woodstove production lines. In addition, EPA will increase compliance oversight and expand rule applicability and effectiveness efforts.

In 1991 the ten EPA Regional Offices will continue their compliance monitoring and enforcement efforts, in concert with states, to ensure compliance with State Implementation Plan (SIP) requirements, new source performance standards (NSPSs), and NESHAPs. The Regions will continue implementation of the strategies for the asbestos D&R program and for benzene, as well as initiatives to enforce the other NESHAPs. The Regions will conduct asbestos D&R inspections and provide additional support to states in following through on their enforcement of D&R activities. The Regions also will use additional resources to support compliance and enforcement of the benzene NESHAPs through the conduct of 125 inspections and initiation of five enforcement actions and of the radionuclide NESHAPs through the inspection of 50 sources and initiation of three enforcement actions.

The Regions will carry out an expanded rule-effectiveness program that covers other source and pollutant categories. The Regions also will continue to implement the compliance monitoring and inspection targeting program to ensure better use of inspection resources. In addition, the Regions will emphasize building state capacity through an expanded review and SIP assistance program for assuring the enforceability of new requirements and targeting compliance efforts toward significant environmental problems. The Regions will direct resources toward implementation of a more effective program for reviewing ozone SIPs and SIP revisions for enforceability. In addition, the Regions will review proposed SIPs for size-specific particulate matter (PM-10) for enforceability and will ensure compliance by sources subject to newly promulgated PM-10 SIPs. The Regions will also continue enforcement of continuous emission monitoring (CEM) requirements for sulfur dioxide (SO_2) sources.

In 1991 the Headquarters enforcement program will provide national program management through policy guidance, planning, and budgeting activities, and through review of selected Regional activities and program performance. Headquarters will also assure the enforceability of proposed Agency regulations under NSPS, NESHAPs, and prevention of significant deterioration (PSD) programs; respond to formal inquiries; manage the Compliance Data System (CDS), the National Asbestos Registry System (NARS), and the compliance portion of the Aerometric Information Retrieval System (AIRS); manage the level of effort contract for case development and other support; and conduct technical studies. Headquarters will continue to implement the technical agenda by developing jointly with the Regions a planned list of technical projects to be initiated in 1991. In addition, Headquarters will provide national leadership to help assure the successful implementation of the revised asbestos D&R strategy.

During 1991 EPA Headquarters will help increase compliance of sources of volatile organic compounds (VOCs) through providing technical and training support to the Regions and state agencies, issuing policy guidance, monitoring compliance and enforcement activities, and overviewing the implementation of the rule-effectiveness protocol. In addition, Headquarters will continue implementing the laboratory program for woodstove testing, reviewing applications for woodstove certification, monitoring certification tests, and certifying production lines. The woodstove program will move into the second phase of certification and enforcement. Additional resources will support implementation of the random compliance audit program. Approximately 250 woodstove production lines will be certified during 1991.

In 1991 Headquarters enforcement staff will review proposed PM-10 and ozone/carbon monoxide (CO) SIPs for national enforceability issues. Headquarters will also evaluate the effectiveness of state and EPA compliance monitoring and inspection programs. In addition, Headquarters will continue to promote the use of CEM and develop national guidance for CEM requirements.

In 1991 EPA will expand Headquarters and Regional enforcement support to the stratospheric ozone depletion program for implementing the Montreal Protocol. The Agency will increase review of the phaseout of CFCs and halons through monitoring compliance of manufacturers and importers. The Agency expects the number of violators identified and enforcement actions taken to increase as a result. Headquarters will develop and disseminate implementation guidance for the radionuclides and benzene NESHAPs. As more regulations are implemented, the need for consistency increases. As a result, the Agency anticipates an increase in requests for rule applicability determinations and will develop guidance for making such determinations. In addition, Headquarters will provide direction and oversight of air toxics compliance and enforcement efforts resulting from anticipated new legislative requirements, particularly in those states where delegations of authority for both existing and prospective standards have not been requested. EPA will also ensure that compliance requirements are reflected in all new regulations and guidance developed for the anticipated acid deposition program. In addition, the Agency will develop guidance for implementation of administrative enforcement requirements resulting from anticipated legislation.

1990 Program

In 1990 the Agency is allocating a total of $18,072,500 supported by 310.6 total workyears to this program, of which $13,722,900 is from the Salaries and Expenses appropriation and $4,349,600 is from the Abatement, Control and Compliance appropriation.

In 1990 the Regional air compliance program is continuing to monitor and ensure the compliance of the 28,000 largest stationary SIP sources, the 2,600 NSPS sources, and the 1,000 nontransitory NESHAPs sources. The Regions are also continuing implementation of the NESHAPs program for asbestos D&R addressing approximately 5,000 contractors and 60,000 notifications.

Major 1990 activities include: continuing the initiative to enhance VOC source compliance in ozone nonattainment areas, implementing a comprehensive program to determine whether adopted VOC measures are being effectively implemented, and conducting VOC compliance workshops to improve the quality of inspections. Other activities in 1990 include ensuring that states continue to enforce existing total suspended particulate (TSP) requirements during the development of PM-10 SIPs and ensuring that SO_2 sources meet, where applicable, CEM requirements. The Regions are continuing their efforts to help improve the technical capabilities of state and local air pollution agencies. Federal enforcement actions, where required, focus on violating sources in nonattainment areas, with particular emphasis on VOC sources and toxic air pollutant sources. EPA works closely with the states in this effort through implementation of Agency guidance on "timely and appropriate" enforcement actions. The Agency provides technical support to the ongoing litigation docket including criminal enforcement activities.

In 1990 EPA Headquarters continues to provide national program management and oversight of the Regional programs to ensure nationwide consistency and effectiveness. The oversight includes a combination of comprehensive program reviews and reviews of certain classes of enforcement actions. Headquarters continues to assure the enforceability of proposed EPA regulations; manage the CDS, including CDS activities related to the development of the new AIRS Facility Subsystem, and the NARS; manage the level of effort contract support program; develop technical and program guidance; and conduct planning and budgeting activities.

In 1990 the Agency is implementing the compliance monitoring and inspection targeting strategy, a major activity that will allow Regional Offices and state agencies to better use their compliance resources. Headquarters is continuing implementation of the NSPS woodstoves program, including the review of applications for woodstoves certification, the monitoring of certification tests, and the evaluation of test results. Headquarters is also continuing the program to improve VOC compliance. This program includes oversight and evaluation of the Regional and state efforts to implement enhanced VOC compliance monitoring and inspection activities, the rule-effectiveness assessments, and the small VOC source strategy. Also, Headquarters is developing a comprehensive training program and compliance determination guides for selected categories of VOC sources. Work to promote use of CEM requirements, including support for Regional and state efforts, also continues to be a major activity. The CFC phasedown effort is in its first year with emphasis placed on stepped-up compliance and enforcement program building.

1989 Accomplishments

In 1989 the Agency obligated a total of $15,757,900, supported by 294.2 total workyears, of which $12,819,500 was from the Salaries and Expenses appropriation and $2,938,400 was from the Abatement, Control and Compliance appropriation.

In response to a need to improve the compliance program, EPA Headquarters, in concert with the Regional Offices, initiated a systematic review of existing guidance documents and source targeting procedures. As a result of this review, the Agency initiated a series of new guidance documents which, when completed, will enable the Regions and states to better target the most pressing environmental compliance problems. The Agency continued its focus on sources of toxic air pollutants, especially sources of asbestos. The Agency completed NARS, a significant component of the revised asbestos D&R strategy. This system allows implementing agencies to focus their enforcement efforts on companies with a history of violating the standards. The compliance program advanced its efforts in the area of technical assistance and training by accomplishing several projects identified through the technical agenda process. These projects included efforts in the areas of communications, VOCs, asbestos, and training and workshops.

AIR
Mobile Source Enforcement

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Mobile Source Enforcement						
Salaries & Expenses		$5,354.9	$5,928.0	$5,709.4	$7,879.7	$2,170.3
Abatement Control and Compliance		$2,331.1	$3,328.1	$3,272.6	$5,116.1	$1,843.5
	TOTAL	$7,686.0	$9,256.1	$8,982.0	$12,995.8	$4,013.8
TOTAL:						
Salaries & Expenses		$5,354.9	$5,928.0	$5,709.4	$7,879.7	$2,170.3
Abatement Control and Compliance		$2,331.1	$3,328.1	$3,272.6	$5,116.1	$1,843.5
Mobile Source Enforcement	TOTAL	$7,686.0	$9,256.1	$8,982.0	$12,995.8	$4,013.8
PERMANENT WORKYEARS						
Mobile Source Enforcement		95.5	113.8	111.3	120.3	9.0
TOTAL PERMANENT WORKYEARS		95.5	113.8	111.3	120.3	9.0
TOTAL WORKYEARS						
Mobile Source Enforcement		99.9	113.8	111.3	120.3	9.0
TOTAL WORKYEARS		99.9	113.8	111.3	120.3	9.0

Mobile Source Enforcement

Budget Request

The Agency requests a total of $12,995,800 supported by 120.3 total workyears for this program, of which $7,879,700 will be for the Salaries and Expenses appropriation and $5,116,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,170,300 in the Salaries and Expenses appropriation, an increase of $1,843,500 in the Abatement, Control and Compliance appropriation, and an increase of 9.0 total workyears.

MOBILE SOURCE ENFORCEMENT

1991 Program Request

The Agency requests a total of $12,995,800 supported by 120.3 total workyears for this program, of which $7,879,700 will be for the Salaries and Expenses appropriation and $5,116,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,170,300 in the Salaries and Expenses appropriation, an increase of $1,843,500 in the Abatement, Control and Compliance appropriation, and an increase of 9.0 total workyears. The increases reflect the additional resources needed to implement provisions of the President's proposed Clean Air Act Amendments.

In support of the ozone control policy, the EPA recall program will investigate 25 suspect light-duty vehicle classes and carry out related diagnostic evaluation and remedy development work. The Agency will continue investigations of trucks. In addition, the Agency will continue investigations into the operations of importers of non-conforming vehicles to ensure that certification procedures are adequately implemented. The Selective Enforcement Audit (SEA) program will conduct ten audits of light-duty vehicle manufacturer facilities, five audits of heavy-duty manufacturer facilities, and four production compliance audits in support of the nonconformance penalties (NCP) program to ensure that new production vehicles and engines meet emissions and NCP requirements.

The field enforcement program will consist of inspections of vehicle fueling facilities as well as the investigation of suspected tampering and misfueling incidents. Enforcement of Phase II of the fuel volatility rules will involve the inspection and sampling of 10,000 refiners, importers, distributors, and retail outlets throughout the country. These inspections are expected to lead to the prosecution of approximately 450 violations of the volatility limits. The fuels inspection effort will also continue the program of sampling fuels for alcohol and other fuel additives to ensure that legal limits are not exceeded. Lead phasedown enforcement (to ensure that refineries, importers, and distributors are complying with the lead phasedown rules) will decrease and involve only five audits of these fuel facilities. A total of 450 tampering investigations will result in approximately 75 notices of violation. The Agency will audit the incidence of tampering and fuel switching at 15 sites primarily to gauge the effectiveness of the anti-tampering programs being implemented by state and local jurisdictions. EPA will continue to assist with the development of state and local programs aimed at preventing tampering and fuel switching.

1990 Program

In 1990 the Agency is allocating a total of $8,982,000 supported by 111.3 total workyears for this program, of which $5,709,400 is from the Salaries and Expenses appropriation and $3,272,600 is from the Abatement, Control and Compliance appropriation.

EPA is continuing the recall program with the investigation of 25 suspect light-duty classes, together with related diagnostic evaluation and remedy development work. The Agency is also continuing the implementation of the regulatory revisions to the imports program. The program is processing an estimated 5,000 applications for importation of nonconforming vehicles. The SEA program is conducting 10 audits of light-duty manufacturer facilities and five audits of heavy-duty manufacturer facilities to ensure that new production vehicles and engines meet emission requirements. Four Production Compliance Audits will be completed. The Agency will answer approximately 1,800 consumer inquiries on emission warranty issues. The Agency will also begin enforcement of Phase II of the fuel volatility rules involving the inspection and sampling of 10,000 refiners, importers, distributors, and retail outlets throughout the country. These inspections, along with the anti-tampering and anti-fuel switching enforcement programs, are expected to result in 500 notices of violations. Audits of tampering and fuel switching are being carried out at 15 sites. EPA is continuing to assist with the implementation and assessment of state and local programs aimed at preventing tampering and fuel switching.

1989 Accomplishments

In 1989 the Agency obligated $7,686,000 supported by 99.9 total workyears for this program, of which $5,354,900 was from the Salaries and Expenses appropriation and $2,331,100 was from the Abatement, Control and Compliance appropriation.

Under the recall program, EPA conducted 28 light-duty vehicle investigations resulting in recalls affecting nearly 5,500,000 vehicles. The Agency issued two California waivers. The SEA program conducted fourteen audits of light-duty manufacturer facilities and seven audits of heavy-duty manufacturer facilities to ensure that new production vehicles and engines meet emissions requirements. The Agency responded to inquiries and applications for the importation of nonconforming vehicles, processing 14,000 applications.

During the first season of fuel volatility enforcement, EPA inspected nearly 4,000 refineries, importers, distributors, and retail outlets over a period of three and a half months. These inspections are expected to result in 60-75 notices of violation. The Agency continued its anti-tampering and anti-fuel switching enforcement program. Accomplishments included the establishment of three new programs by states and localities and the issuance of 417 notices of violation in the tampering and fuels enforcement programs.

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WATER QUALITY

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
APPROPRIATION					
Salaries & Expenses	$107,479.4	$116,565.1	$114,765.1	$127,456.4	$12,691.3
Abatement Control and Compliance	$169,320.6	$222,569.7	$219,595.6	$238,881.3	$19,285.7
Research & Development	$8,540.7	$11,157.4	$10,978.8	$12,758.8	$1,780.0
TOTAL, Water Quality	$285,340.7	$350,292.2	$345,339.5	$379,096.5	$33,757.0
PERMANENT WORKYEARS	2,012.8	2,293.0	2,135.0	2,311.8	176.8
TOTAL WORKYEARS	2,145.2	2,294.0	2,225.9	2,311.8	85.9
OUTLAYS	$270,382.5	$334,643.9	$333,127.9	$358,749.0	$25,621.1
AUTHORIZATION LEVELS	The Water Quality Act of 1987 reauthorized this program at a level of $410,270.0 for 1989, $410,270.0 for 1990. Authorization for the Clean Water Act as amended in 1987 expired on September 30, 1989. Reauthorization is pending.				

WATER QUALITY

OVERVIEW AND STRATEGY

The legislative basis for EPA's water quality programs is provided in the Clean Water Act, as amended; the Marine Protection, Research and Sanctuaries Act, as amended; and the Marine Plastic Pollution Research and Control Act of 1987. These laws direct EPA to take measures to protect the nation's waters in order to safeguard public health, recreational uses and aquatic life.

The Water Quality Act (WQA) of 1987, which amended the Clean Water Act, expanded and strengthened the statute through a number of changes designed to enhance water quality and improve the well-defined partnership between EPA and the states. The amended Act ratifies existing programs (e.g., technology-based and water quality-based effluent limits for point source dischargers). It also provides new tools to strengthen existing programs (e.g., mandatory permits to control sewage sludge contamination and administrative penalties to streamline enforcement actions) and establishes new approaches to address existing water pollution problems (e.g., new programs for control of nonpoint source pollution and permitting of stormwater discharges). Finally, the amended Act provides funds to capitalize state revolving loan funds and mandates requirements to address existing and emerging problems (e.g., surface water toxic control programs). The WQA gives legislative recognition to three programs which address near coastal waters problems: the National Estuary, Chesapeake Bay and Great Lakes Programs.

The Marine Protection, Research and Sanctuaries Act (MPRSA) is designed to protect the ocean from unregulated dumping of material that would endanger human health, public welfare, the marine environment, or economic potential. The Act authorizes the Agency to develop criteria for ocean disposal of industrial waste, municipal sludges and other dredged materials. EPA is authorized to designate disposal sites and is responsible for the management and monitoring of these sites. EPA is authorized to issue permits for all non-dredged materials; however, the Corps of Engineers is responsible for issuing permits for dredged material, using human health and marine impact criteria developed by EPA.

The Ocean Dumping Ban Act, which amended the MPRSA, sets a December 1991 deadline to end ocean dumping of sewage sludge and industrial waste. EPA is to issue dumping permits and negotiate agreements with the dumpers that include a schedule for the ending of ocean dumping and for implementation of alternative disposal systems. The legislation imposes two disposal fees on permitted dumpers: an administrative fee to cover the costs of carrying out the Act and a punitive fee to be paid by dumpers who cannot end ocean dumping in 1991.

The Marine Plastic Pollution Research and Control Act of 1987 implements Annex V of the International Convention for the Prevention of Pollution from Ships (1973) and establishes programs to identify and reduce the effects of plastic pollution on the marine environment. Under this law, EPA was required to submit a report to Congress on methods to reduce plastic pollution; assist the National Oceanic and Atmospheric Administration in conducting a public education program; prepare a New York Bight Restoration Plan; and submit a report to Congress on the problems associated with plastic debris in the New York Bight.

Water quality programs in 1991 will continue to focus on building state and local capacity to protect high risk, vulnerable ecosystems from pollution; protecting the nation's surface waters from toxic and hazardous point source discharges; preventing and controlling nonpoint sources of pollution; and maintaining the progress made to date in cleaning up and developing the infrastructure to protect our surface waters. EPA will provide technical and financial assistance to states to carry out their increased base workload, meet new requirements, and attempt to offset the reduction of construction grant set-aside funds that have sustained a major portion of their base program activity.

These water quality programs will enable the nation to begin addressing emerging global issues and enhance our ability to protect critical aquatic habitats, including wetlands and marine and estuarine environments. At the same time, these programs will provide further improvements in enforcement programs, promote state capacity through local cooperative initiatives and provide incentives for developing innovative approaches and technology.

Protecting Critical Habitats

Wetlands loss has a major impact on our environment, including adverse effects on species populations and water quality and the severity of flooding. In 1991, EPA will implement recommendations of the Domestic Policy Council's Wetlands Task Force. This is a high priority for the Agency in its efforts to prevent and control pollution that poses risk to critical aquatic habitats. To assist in attaining no net loss of wetlands, EPA will encourage states and Indian tribes to develop wetland protection programs, improve scientific knowledge about wetlands protection, work closely with other agencies and apply stronger enforcement actions to deter and punish polluters who illegally destroy these natural resources.

Another effort to reduce risk to critical aquatic habitats in coastal and marine areas. EPA is increasing its focus on protection and restoration of the nation's near coastal waters and the oceans. In 1991, the Agency will continue support for the Great Lakes, Chesapeake Bay and Gulf of Mexico programs, and the National Estuary Program will support 16 projects to develop and implement management plans. Regional strategies for near coastal waters which assess pollutant loadings and establish necessary pollution control and pollution prevention programs to protect all coastal waters, including the Great Lakes, will be implemented. To help states establish a strong framework to protect and restore their coastal waters, EPA will accelerate efforts to produce both regulatory and non-regulatory tools to address site-specific problems. This will include development of ecologically-based salt and fresh water criteria appropriate for different types of aquatic resources and development of water quality standards for pollutants of concern.

A plan to regulate currently unregulated industries and pollutants will be published by 1990, and EPA will accelerate work to produce technology-based standards for several new industries, selected through risk-ranking procedures. Stormwater discharger application rules for large and medium municipalities and industrial activities will be defended and implemented.

The Agency will oversee implementation of the Ocean Dumping Ban Act and continue work in support of oil spill restoration programs. EPA will continue involvement with the Corps of Engineers in the designation and management of environmentally safe dredged material disposal sites and work to reduce illegal dumping of dredged material through improved identification procedures and surveillance. The New York Bight Restoration Plan will be completed, and the Agency will continue activities to identify and control plastic pollution in marine environments.

Improving State Capacity

Water quality programs will promote state and local cooperative initiatives and provide incentives for developing innovative and alternative technology. Indian tribes will be encouraged to participate as full and equal decision makers in the protection of water resources on their lands through the provision of technical assistance. Through the National Estuary Program, cooperation and environmental management at the Regional, state and local level will be advanced as the Agency and its Federal partners continue to work with state and local agencies to develop and implement management plans for their estuary projects.

Financial assistance will be provided through cooperative agreements to assist states with the National Pollutant Discharge Elimination System (NPDES) program approvals (and help states obtain this approval); to meet new complex tasks such as issuing new permits for control of combined sewer overflows, sludge and stormwater; to take enforcement action; to upgrade local pretreatment programs; and to set new water quality standards for salt water and wetlands. Further, the Agency is working to establish long-term viable state revolving loan funds that can provide financial assistance for construction of new and upgraded wastewater treatment facilities needed by communities to comply with the Clean Water Act, and for other purposes such as nonpoint source and ground-water protection. Wetlands implementation grants will enable implementation of wetlands programs that leverage state activities.

EPA will assist states in refining their risk management techniques to more accurately reflect the impact of nonpoint source pollution on sensitive aquatic resources and habitats and in moving toward risk-based management of nonpoint source pollution. EPA will also assist the states in implementing their approved nonpoint source management programs by leveraging other Federal agencies' resources and providing states with grant funds to implement approved elements of state nonpoint source management programs. State and local initiatives will be supported through information clearinghouse and educational programs to identify problems (and potential solutions) that communities face from nonpoint source pollution, as well as wetlands pollution and loss.

Specialized technical assistance will be offered for the pretreatment, compliance and enforcement programs, including hands-on aid to publicly owned treatment works (POTWs) that have difficulty developing local limits for specific categories of indirect industrial dischargers, difficulty meeting their toxicity requirements or have no local pretreatment program. POTWs that discharge to sensitive aquatic resources at greatest risk will also be targeted for this specialized assistance. General assistance efforts will continue to help communities deal with the problems of sewer infiltration/exfiltration, infrastructure and treatment and sludge reuse.

Demonstration projects continue to be extremely useful in leveraging state and local funds, as well as local interest and support for water quality. EPA will fund demonstration projects in the various coastal areas to test solutions and support local management decisions in areas such as nonpoint source pollution controls, low cost technologies for combined sewer overflow and stormwater controls, wetlands restoration techniques, compliance assessment projects and pollution prevention activities. These projects seek to encourage state, local and private investment in the application of these problem solutions in other geographic areas in the future.

Enforcing Water Quality Controls

In 1991, the water quality enforcement effort will be strengthened by tightening controls on dischargers, improving monitoring efforts and coordinating outreach to inform the public and regulated community of the consequences of improper or illegal disposal of wastes or filling of wetlands. This effort will also include taking stronger enforcement actions through the use of administrative orders, penalties and referrals and a greater field presence to detect and address violations. Continued compliance by POTWs will be encouraged by giving priority to resolution of violations at POTWs that have completed construction to meet final effluent limits and by vigorously enforcing pretreatment requirements.

In an effort to support protection of coastal and marine environments, permitting and enforcement activities will be targeted to achieve maximum water quality improvement. In addition, EPA will continue to promote further delegation of our statutorily mandated program for the National Pollutant Discharge Elimination System.

Preventing Pollution

EPA will address the growing global trend towards pollution prevention as an important means of protecting our natural resources. Efforts will include international conferences and special projects related to industrial, municipal and agricultural pollution prevention. The conferences augment continuing efforts to share our industrial technology-based guidelines with other nations through organizations such as the World Bank and the Organization for Economic Cooperation and Development, and to become familiar with pollution prevention techniques being successfully employed by other nations. EPA will also expand support for international activities, generally including the London Dumping Convention, MARPOL, the Cartagena Convention and the Antarctic Treaty, and sponsor and participate in workshops and symposia for the international community. Work will continue in conjunction with the wetlands and coastal protection programs of Canada and Mexico to protect these shared water resources, particularly where efforts coincide with bi-national programs involving the Great Lakes and the Gulf of Mexico.

EPA will continue to exhibit domestic environmental leadership where the Federal role is effectively targeted to address emerging environmental problems. The Agency will use pollution prevention and control approaches that involve both public and private capacities. In 1991, the Agency will encourage pollution prevention in its municipal pollution control program through technical assistance to states that will help maintain and improve permit compliance. Likewise, water use efficiency will be promoted in order to reduce pressure for expanding waste treatment capacities and the construction of costly new, environmentally-damaging impoundments.

Performing Research and Development

In 1991, EPA's research program will provide increased focus on wetlands, sediment quality and a renewed emphasis on oil spills research.

With losses of over one half of the nation's wetlands and the increased recognition of their ecological and social value emphasized through the "no net loss" goal, research will focus efforts on the science of wetlands creation and restoration. This will include development of scientific guidelines for operational decisions to achieve "no net losses" and to produce and validate design criteria for creation and restoration of the many varying types of wetlands.

Most chemical contaminants and organic wastes in aquatic ecosystems eventually accumulate in the sediments where they adversely affect the water column, accumulate in biological tissues, and enter human food chains. Sediments have become the concern for many state and EPA regulatory activities because of potential impacts, the long periods of time associated with natural assimilation of many in-place pollutants and the high cost of mitigation action. Current EPA areas requiring sediment quality assessments include ocean disposal, NEPA reviews, Superfund, Great Lakes, Chesapeake Bay and estuary projects. Studies will be conducted to compare approaches for developing sediment quality criteria. Comparative toxicological data bases will be used to begin deriving contaminant-specific sediment quality criteria and to recommend minimum test requirements for sediment quality evaluations.

Oil spill technologies have not progressed over the past decade to incorporate scientific advances such as microbial degradation. In 1991, research will include bioremediation research at Valdez, Alaska, designed to evaluate the feasibility of accelerating the rate of biological degradation of residues on Prince William Sound's shore lines. A renewed National Oil Spills Program will focus on thermal, chemical and biological approaches to spill prevention and clean-up, while research on the "physical" clean-up activity will be carried out by the U.S. Coast Guard.

Consulting Services

The Agency uses consulting resources to fulfill the requirements of its authorizing legislation, specifically in providing technical assistance to Regions, states and local governments; collecting data and monitoring background levels as a basis for future regulatory actions; and conducting studies and analyses which support new programs.

WATER QUALITY

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase + Decrease - 1991 vs. 1990
PROGRAM ACTIVITIES				
Incremental Outputs				
EPA Ocean Dumping Permit Reviews	25	25	25	--
Ocean Discharge Criteria Eval.				
Major......................	12	23	23	--
Minor......................	--	0	41	+41
Construction Grants Awards.....................	402	339	89	-250
Active Construction Grants Projects...................	6,095	5,474	4,800	-674
Construction Projects Initiating Operations.......	662	438	425	-13
Permits Issued by EPA:				
Municipal				
Major....................	168	265	285	+20
Sludge Requirements......	168	265	285	+20
Minor....................	316	0	0	--
Non-Municipal				
Major....................	250	285	265	-20
Minor....................	631	0	0	--
General..................	0	5	5	--
Adjudicatory Hearings Settled.................	21	100	100	--
Enforcement Actions:				
Inspections................	2,512	1,900	1,900	--
Admin. Orders (AOs)........	654	567	474	-93
AOs with Penalties.........	220	246	298	+52
Civil Litigation...........	82	59	71	+12
Criminal Litigation........	21	16	20	+4
Clean Lakes Projects/Studies/ Assessments................	98	100	0	-100
Final Water Quality Criteria	1	7	5	-2

WATER QUALITY

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase + Decrease - 1991 vs. 1990
PROGRAM ACTIVITIES				
Cumulative Outputs				
Operational SRF Programs.....	43	50	50	--
Effluent Guidelines..........	51	51	54	+3
Regulations/Support Documents for Sludge Reuse/Disposal...	6	6	6	--
NPDES State Program Approvals	39	40	40	--
National Estuary Projects....	12	16	16	--

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WATER QUALITY
Water Quality Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PROGRAM					
Scientific Assessment - Water					
Salaries & Expenses	$223.9	$300.4	$396.4	$455.0	$58.6
Research & Development	$308.2	$311.8	$304.3	$312.5	$8.2
TOTAL	$532.1	$612.2	$700.7	$767.5	$66.8
Monitoring Systems And Quality Assurance - Water					
Salaries & Expenses	$3,018.5	$3,331.4	$3,294.3	$3,395.4	$101.1
Research & Development	$929.0	$990.8	$919.8	$995.9	$76.1
TOTAL	$3,947.5	$4,322.2	$4,214.1	$4,391.3	$177.2
Health Effects - Water					
Salaries & Expenses	$559.4	$604.7	$506.1	$362.4	-$143.7
TOTAL	$559.4	$604.7	$506.1	$362.4	-$143.7
Environmental Engineering And Technology - Water					
Salaries & Expenses	$2,146.3	$2,519.0	$2,402.2	$2,476.4	$74.2
Research & Development	$3,213.8	$3,428.5	$3,335.1	$3,525.6	$190.5
TOTAL	$5,360.1	$5,947.5	$5,737.3	$6,002.0	$264.7
Environmental Processes And Effects - Water					
Salaries & Expenses	$9,142.8	$8,989.5	$8,645.6	$8,937.0	$291.4
Research & Development	$2,689.0	$3,967.4	$4,008.0	$4,445.1	$437.1
TOTAL	$11,831.8	$12,956.9	$12,653.6	$13,382.1	$728.5
Great Lakes Research - Water					
Salaries & Expenses	$482.5	$738.7	$480.0	$480.0	
Research & Development	$1,400.7	$1,474.4	$1,437.6	$1,479.7	$42.1
TOTAL	$1,883.2	$2,213.1	$1,917.6	$1,959.7	$42.1
Oil Spills					
Salaries & Expenses		$478.9			
Research & Development		$984.5	$974.0	$2,000.0	$1,026.0
TOTAL		$1,463.4	$974.0	$2,000.0	$1,026.0
TOTAL:					
Salaries & Expenses	$15,573.4	$16,962.6	$15,724.6	$16,106.2	$381.6
Research & Development	$8,540.7	$11,157.4	$10,978.8	$12,758.8	$1,780.0
Water Quality Research TOTAL	$24,114.1	$28,120.0	$26,703.4	$28,865.0	$2,161.6
PERMANENT WORKYEARS					
Scientific Assessment - Water	3.0	5.0	5.0	5.0	0.0

WATER QUALITY
Water Quality Research

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Monitoring Systems And Quality Assurance - Water	48.6	54.4	51.4	52.4	1.0
Health Effects - Water	8.3	9.1	8.7	4.7	-4.0
Environmental Engineering And Technology - Water	33.8	37.3	35.3	36.7	1.4
Environmental Processes And Effects - Water	144.5	152.2	144.4	152.2	7.8
Great Lakes Research - Water	5.2	13.0	8.0	8.0	0.0
TOTAL PERMANENT WORKYEARS	243.4	280.0	252.8	259.0	6.2
TOTAL WORKYEARS					
Scientific Assessment - Water	4.5	5.0	5.0	5.0	0.0
Monitoring Systems And Quality Assurance - Water	54.6	54.4	51.4	52.4	1.0
Health Effects - Water	9.1	9.1	8.7	4.7	-4.0
Environmental Engineering And Technology - Water	34.5	37.3	35.3	36.7	1.4
Environmental Processes And Effects - Water	158.1	152.2	144.4	152.2	7.8
Great Lakes Research - Water	7.2	13.0	8.0	8.0	0.0
TOTAL WORKYEARS	268.0	280.0	252.8	259.0	6.2

WATER QUALITY

Water Quality Research

Principal Outputs by Objective

Objective 1: Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control

1991:
- Revise ambient water quality criteria as necessary (Scientific Assessment)
- Provide recommendations on appropriate indication of ecological status and trends for development of National and Regional Biocriteria (Monitoring)
- Develop scientific data on predicting effects of disturbance of water quality functions on wetlands. (Environmental Processes)

1990:
- Prepare seven (7) new health advisories and respond to comments on 65 ambient water quality criteria addenda revisions (Scientific Assessment)
- Evaluate monitoring techniques and a generic approach to measurements of toxic compounds (Monitoring)
- Report on validation of water quality criteria for Selenium (Environmental Processes)
- Report on water quality functions of wetlands (Environmental Processes)

1989:
- Finalized 65 water quality addenda for water criteria documents (Scientific Assessment)
- Finalized 19 health advisories (Scientific Assessment)
- Evaluated and standardized methodology for quantification of human pathogens (Monitoring)
- Report on developing sediment quality criteria from existing water quality criteria (Environmental Processes)

Objective 2: Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine and Great Lakes Programs

1991:
- Report on the application of wasteload allocation models to multiple discharge sources into estuaries (Environmental Processes)
- Report on dredge material assessment techniques (Environmental Processes)

1990:
- Report of methods development, standardization and evaluation of toxicity tests for marine, estuarine and freshwater organisms (Monitoring)
- Verify models used in 301(h) to define the zone of initial dilution and water quality parameters (Environmental Processes)
- Report on the characterization of complex mixtures using a biomarker approach (Environmental Processes)

1989: o Develop methods for solid phase bioaccumulation tests (Environmental Processes)

o Report on the effects on marine ecosystems from industrial contaminants in sewage effluent on marine ecosystems (Environmental Processes)

o Report on methods for predicting biological impacts of in-place pollutants in the upper Great Lakes connecting - channels (Environmental Processes)

Objective 3: Evaluate of New Technologies, Infrastructure Protection, Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods and Technology

1991: o Develop risk assessment methods for surface disposal to develop criteria. Investigate methods to incorporate those individuals highly exposed into assessments (Scientific Assessment)

o Develop guidance manual for EPA and State use in evaluation/certification of toxicity testing laboratories (Monitoring)

o Report on survival, viability and detection of pathogenic protozoa in sludge (Monitoring)

o Compare fish bioassay with conventional toxicity testing (Health)

o Develop data base on the kinetics of removal of specific toxics by sorption, volatilization, and biodegradation (Engineering)

o Provide assessment of toxicants in storm water runoff (Engineering)

1990: o Finalize risk assessments for surface impoundment methodology (Scientific Assessment)

o Maintain discharge monitoring report as support for the quality assurance program (Monitoring)

o Report on the fate of toxic organics during sludge treatment (Engineering)

o Report on pilot-scale treatability studies on the pesticides manufacturing wastewater (Engineering)

1989: o Drafted pathogen land application methodology (Scientific Assessment)

o Standardized methodology for collection, identification, and enumeration of human pathogenic organisms in sludge and soil to monitor the safety of direct land-application of wastewater and/or sludge (Monitoring)

o Report on effectiveness of available methodology for reducing toxic metals and organic from incineration emissions (Engineering)

WATER QUALITY

Water Quality Research

Budget Request

The Agency requests a total of $28,865,000 supported by 259.0 total workyears for 1991, increases of $2,161,600 and 6.2 total workyears from 1990. Of the request, $16,106,200 will be for the Salaries and Expenses appropriation and $12,758,800 will be for the Research and Development appropriation, an increase of $381,600 and of $1,780,000, respectively.

Program Objectives

The Water Quality research program provides the scientific and technical data to States and the EPA's Office of Water in implementing the Clean Water Act (CWA), the Marine Protection, Research and Sanctuaries Act and the Plastics Pollution Research and Control Act of 1987.

Objective 1: Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control. This research provides the scientific base to help States develop water quality standards, to conduct use-attainability analyses and to provide needed information to implement the Agencies water quality based pollution control program.

Objective 2: Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine, Great Lakes and Oil Spills Programs. This research provides the scientific base needed by EPA for evaluating impacts of ocean disposal practices, understanding the Great Lakes ecosystems, developing responsive and scientifically valid estuarine and coastal waters programs and establishing national oils spills research efforts focusing on thermal, chemical and biological remediation.

Objective 3: Evaluate New Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. The wastewater research program provides the technical information, engineering and monitoring assistance needed by EPA, municipalities, and industry for the development and implementation of regulations, guidance for disposal of sludge, and control of pollution from municipal treatment plants to bring plants into compliance with state discharge permits, and to support the National Pollutant Discharge Elimination System (NPDES).

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $767,500 supported by 5.0 total workyears for this program, of which $455,000 will be for the Salaries and Expenses appropriation and $312,500 will be for the Research and Development appropriation. This represents an increase of $58,600 in the Salaries and Expenses appropriation, an increase of $8,200 in the Research and Development appropriation, and no change in workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of the in-house research program. The increase in the Research and Development appropriation reflects a general enhancement of in-house support for the scientific assessment program.

Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control. This activity, in support of Post-Best Available Technology (BAT) requirements, will continue to provide support to the Agency and the States for updating, modification, and implementation of health criteria for ambient water quality. This activity also develops health advisories in support of effluent regulations for toxics and provides technical support to the Regions and States on risk assessments and the theories behind them.

Evaluate New Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. The Clean Water Act (CWA) Amendments require the Agency to identify and regulate toxic pollutants in sludge. This program will provide technical support in the development and implementation of these regulations including the development of criteria for the assessment of hazard and risk from exposure to pathogens in sludge and surface impoundments methodology for disposed of municipal sludge.

1990 Program

In 1990, the Agency is allocating a total of $700,700 supported by 5.0 total workyears for this program, of which $396,400 is from the Salaries and Expenses appropriation and $304,300 is from the Research and Development appropriation.

The research efforts as in 1991 are: providing support to the Agency and States on health criteria for water quality; developing health advisories in support of effluent regulations; providing technical support for risk assessments; and theory; to the Regions and States; and developing criteria for assessment of hazard and risk from pathogens in sludge, and methodology for disposal of municipal sludge in surface impoundments.

1989 Accomplishments

In 1989, the Agency obligated a total of $532,100 supported by total of 4.5 workyears for this program, of which $223,900 was from the Salaries and Expenses appropriation and $308,200 was from the Research and Development appropriation.

The program revised 65 ambient water quality documents and completed 19 health advisories, provided technical support to eight regions and numerous States on criteria, completed a draft pathogen land application methodology for use in risk assessments and initiated a methodology for addressing risk from surface sludge impoundments.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $4,391,300 supported by 52.4 total workyears for this program, of which $3,395,400 will be for the Salaries and Expenses appropriation and $995,900 will be for the Research and Development appropriation. This represents an increase of $101,100 in the Salaries and Expenses appropriation, $76,100 in the Research and Development appropriation and 1.0 workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for the monitoring program while the increase in Research and Development represents support for the Administrator's pollution prevention initiatives.

Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control. The CWA Amendments place emphasis on the development of methods to measure and monitor water quality. In support of this activity, research will develop and standardize methods and provide field tested protocols to assess ambient water quality. In addition, the program will evaluate biological and microbial monitoring techniques and promulgate standardize tests to measure chronic toxicity.

Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine, Great Lakes and Oil Spills Programs. This research will be continue to support Regional needs for methods standardization, support for the National Estuarine Program and other marine and estuarine monitoring and management programs. Research in marine chemical methods will be conducted consistent with the Agency's highest priority needs. Research will continue on methods to determine the microbial quality in marine systems including the standardization of methods to distinguish human and animal fecal contamination and the development of protocols for monitoring coastal waters, viruses in shellfish, and bacteria associated with fish diseases.

Evaluate New Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. This research will conduct semi-annual performance evaluation studies to review and revise the Agency's Quality Assurance support. Performance criteria will be developed for NPDES permit analysis, and investigation of analytical method deficiencies, identified by NPDES permitters, will be continued.

1990 Program

In 1990, the Agency is allocating a total of $4,214,100 supported by 51.4 total workyears for this program, of which $3,294,300 is from the Salaries and Expenses appropriation and $919,800 is from the Research and Development appropriation.

This research program is evaluating chemical monitoring methods and protocols to measure site-specific aspects of water quality. This research provides cost-effective monitoring methods for the measurement of chemical and biological parameters required in the National Pollutant Discharge Elimination System (NPDES) Program and in the assessment of fresh water quality and quantification of contaminants in sediments and sludge. Research will also adapt fresh water methods on analysis of marine water quality.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,947,500 supported by 54.6 total workyears for its monitoring and quality assurance program in water quality, of which $3,018,500 was from the Salaries and Expenses appropriation and $929,000 was from the Research and Development appropriation.

In support of the Clean Water Act and the Marine Protection Research and Sanctuaries Act, standardized methodology for the collection, identification, and enumeration of human pathogenic organisms in sludge and soil were developed to monitor the safety of direct land-application of wastewater or sludge. Inter-laboratory comparisons were performed to assess the performance of chemical and biological methods for the analysis of contaminants regulated under NPDES. A repository of toxic standards and calibration samples was maintained.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $362,400 supported by 4.7 total workyears for this program, of which $362,400 will be for the Salaries and Expenses appropriation and no dollars for the Research and Development appropriation. This represents an decrease of $143,700 from the Salaries and Expenses appropriation and a decrease of 4.0 total workyears. The decrease in the Salaries and Expenses appropriation reflects the reduction in workyears off-set by a general enhancement of in-house support for health effects program. The decrease in workyears reflect a general realignment of agency priorities.

Evaluate New Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. Health evaluations on specific chemicals and chemical mixtures identified in municipal sludge and waste water effluents will be initiated using in-vitro bioassays to support the development and defense of sludge disposal criteria.

1990 Program

In 1990, the Agency is allocating a total of $506,100 supported by 8.7 total workyears for this program, of which $506,100 is from the Salaries and Expenses appropriation and no dollars from the Research and Development appropriation.

This in-house research program is examining the relationship between in-vitro toxicity testing used to estimate health effects and ecosystem tumor tests. This research will continue to strengthen the data base necessary to support risk evaluation.

1989 Accomplishments

In 1989, the Agency obligated a total of $559,400 supported by 9.1 total workyears for this program, of which $559,400 was from the Salaries and Expenses appropriation and no dollars from the Research and Development appropriation.

Research activities were directed toward assessing and modifying bioassay methods used to assess the toxicity of municipal sludge and wastewater effluent. These assays were evaluated for their ability to characterize the toxicity for treatability and to identify toxicants causing the toxicity.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $6,002,000 supported by 36.7 total workyears for this program, of which $2,476,400 will be for the Salaries and Expenses appropriation and $3,525,600 will be for the Research and Development appropriation. This represents an increase of $74,200 in the Salaries and Expenses appropriation, an increase in of $190,500 in the Research and Development appropriation, and an increase of 1.4 workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for the engineering research program. The increase in the Research and Development appropriation reflect support for the Administrator's pollution prevention initiatives. The increase in workyears reflects additional support for small community needs.

Evaluate New Wastewater Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. New conveyance and treatment technologies with promise of improved economies or effectiveness will be evaluated and the results provided to States, municipalities, and design professionals. Technical investigations will be conducted on the infrastructure of _Publicly Owned Treatment Works (POTWs) and the results will be provided to the municipalities to help realize full value of these investments and properly operate and maintain the facilities. Technical assistance will be provided and research conducted to support the Agency's storm and combined sewer overflow program mandated by the Clean Water Act. Research and technical assistance will be continued to support sludge regulation implementation and updating. Toxics treatability and toxicity reduction evaluations for the pulp and paper industry will be initiated.

1990 Program

In 1990, the Agency is allocating a total of $5,737,300 supported by 35.3 total workyears for this program, of which $2,402,200 is from the Salaries and Expenses appropriation and $3,335,100 is from the Research and Development appropriation.

New wastewater technologies are being evaluated to determine and promote more cost effective treatment processes. Technical support is being provided to the Office of Water for development of sludge regulations on permit limitations for municipal and industrial wastewater. Toxics treatability is being assessed. Toxicity reduction valuation procedures and removal capabilities are being developed for various treatment processes. Technical support is being provided to municipalities to upgrade existing plant capabilities to achieve compliance while minimizing costs. Research is being initiated to evaluate the cost effectiveness and efficiency of different treatment as a options. The development of a pesticide treatability data base is being initiated.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,360,100 supported by 34.5 total workyears for this program, of which $2,146,300 was from the Salaries and Expenses appropriation and $3,213,800 was from the Research and Development appropriation.

Major accomplishments included technology evaluations on selected high potential Innovative/Alternative candidates, technical support and engineering assistance provided to the EPA regulatory offices, Regions, States and municipalities for the development and implementation of sludge regulation and permit requirements rules.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $13,382,100 supported by 152.2 total workyears for this program, of which $8,937,000 will be for the Salaries and Expenses appropriation and $4,445,100 will be for the Research and Development appropriation. This represents an increase of $291,400 in the Salaries and Expenses appropriation, and an increase of $437,100 in the Research and Development appropriation. Total workyears will increase by 7.8 workyears. The increase in the Salaries and Expenses appropriation reflects a general enhancement of in-house support for the processes and effects research program, while the increases in the Research and Development appropriation and total workyears reflects additional research on emerging issues such as sediment quality and implementation of the Agency's "No Net Loss" protection policy for wetlands.

Develop Scientific Data to Support a Water Quality Based Approach to Pollution Control. As a follow-up to the Post-Best Available Technology (BAT) requirements of the CWA Amendments, this research will develop methods to determine both water quality criteria and sediment quality criteria for use in the water quality based approach to permitting. This approach integrates pollutant-specific control methods with toxicity testing procedures and BAT limits for permitting. Research will also strengthen the scientific and technical data base and methodologies to assess water quality functions of wetlands, to assess individual and cumulative impacts of wetland conversions, and evaluate means of mitigating wetland impacts. Increased emphasis will be given to research on sediment quality. The data from these studies will assist the States in developing individual strategies for controlling toxic pollutants and implementing "No Net Loss" protection policies for wetlands.

Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine, Great Lakes, and Oil Spill Programs. This research will develop procedures to assess impacts on oceans from disposal of wastes in coastal waters. These procedures will determine the relative safety of ocean disposal and compare alternative disposal strategies. Research will also be conducted to support the Agency's strategy to reduce pollution in near coastal waters. The research program will focus on recovery of coastal ecosystems, development of biomarker assessment methods, coastal eutrophication problems and development of wasteload allocation models for estuarine and coastal waters.

Evaluate New Technologies, Infrastructure Protection, Stormwater and Combined Sewer Overflow, Sludge Management Alternatives and Toxicity Reduction Methods. Research will continue to maintain and update the existing library of gas chromatograph/ mass spectroscopy tapes and develop new analytical data bases of toxic pollutants found in industrial wastewater. The data bases will provide the information on wastewater treatment technology needed to support the NPDES program. Research on ecological fate and effects issues associated with wetlands constructed for wastewater treatment will continue.

1990 Program

In 1990, the Agency is allocating a total of $12,653,600 supported by 144.4 total workyears for this program, of which $8,645,600 is from the Salaries and Expenses appropriation and $4,008,000 is from the Research and Development appropriation.

Research is being conducted to develop methods to integrate whole effluent testing procedures with chemical specific control technology. Research continues on methods to assess: water quality functions and ecological impacts associated with wetlands; the cumulative loss of wetlands; and mitigation of impacts on wetlands. Research on methods to better assess the impacts of ocean disposal activities is being conducted. These procedures will be used in risk assessments. Estuarine and near coastal waters research is focused on questions of ecosystem recovery, eutrophication, wasteload allocation and biomarkers as assessment techniques in coastal waters.

1989 Accomplishments

In 1989, the Agency obligated a total of $11,831,800 supported by 158.1 total workyears for this program, of which $9,142,800 was from the Salaries and Expenses appropriation and $2,689,000 was from the Research and Development appropriation.

Major accomplishments include the development of aquatic life water quality criteria documents, water quality advisories, a report on the ecological effects of nutrients verses contaminants from Publicly-Owned Treatment Works, a report on the ecological effects of industrial contaminants in sewage effluent on the marine ecosystem, and a report on equilibrium partitioning in sediments useful in the development of sediment quality criteria.

GREAT LAKES

1991 Program Request

The Agency requests a total of $1,959,700 supported by 8.0 total workyears for this program, of which $480,000 will be for the Salaries and Expenses appropriation and $1,479,700 will be for the Research and Development appropriation. This represents no change in the Salaries and Expenses appropriation, an increase of $42,100 in the Research and Development appropriation and, no change in total workyears.

Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine, Great Lakes and Oil Spills Programs. Research will develop and test methods to determine the sources, movement and effects of toxic substances in the Great Lakes. Emphasis will be given to research on in-place pollutants and mass balance studies. This program will also provide the Great Lakes National

Program Office, EPA Regions II, III and V the Great Lakes states, and the International Joint Commission (under the US/Canada Water Quality Agreement) with technical support and research data.

1990 Program

In 1990, the Agency is allocating a total of $1,917,600 supported by 8.0 total workyears for this program, of which $480,000 is from the Salaries and Expenses appropriation and $1,437,600 is from the Research and Development appropriation.

The research is focusing on the impact and fate of toxic materials in areas of concern identified by the Great Lakes National Program and the International Joint Commission. Emphasis is on in-place pollutants, chemical mass balance research, and evaluation of the effectiveness of confined disposal facilities for dredged material.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,883,200 supported by 7.2 total workyears for this program, of which $482,500 was from the Salaries and Expenses appropriation and $1,400,700 was from the Research and Development appropriation.

Among the many accomplishments of the Great Lakes Research program were: a report on methods for predicting biological impacts of in place pollutants in the upper Great Lakes connecting channels, a report on methods for predicting probability distribution of exposure for toxic substances in fresh water ecosystems, and technical assistance provided to the Great Lakes National Program Office, the Regions, International Joint Commission, and the cooperating Universities.

OIL SPILLS

1991 Program Request

The Agency requests a total of $2,000,000 supported by no workyears for this program, of which no resources will be for the Salaries and Expenses appropriation and $2,000,000 will be for the Research and Development appropriation. This represents no change in the Salaries and Expenses appropriation, an increase of $1,026,000 in the Research and Development appropriation, and no change in the total workyears.

Develop Scientific Data to Support Environmentally Sound Ocean Disposal, Estuarine, Great Lakes and Oil Spills Programs. Oil spills technologies have not progressed over the past decade to incorporate scientific advances, such as microbial degradation. Research will continue to support bioremediation advances being studied at Prince William Sound, and will initiate a renewed National Oil Spills Program in which EPA will focus on thermal, chemical, and biological approaches to prevent and clean-up oil spills. Research on the "physical" clean-up of oil spills will be the responsibility of the U.S. Coast Guard.

1990 Program

In 1990, the Agency is allocating a total of $974,0000 for this program, of which none is from the Salaries and Expenses appropriation and $974,000 is from the Research and Development appropriation.

In support of the clean-up of Prince William Sound, Agency research is continuing to evaluate the effectiveness of bioremediation as a clean-up technology and to determine if any toxic effects are occurring. The Agency is negotiating to continue the existing Federal Technology Transfer Act (FTTA) Cooperative Agreement with Exxon to help support this activity.

1989 Accomplishments

In 1989, the Office of Research and Development obligated a total of $1,646,300 for the Prince William Sound emergency. In addition, $1,601,000 provided by Exxon through a FTTA Cooperative Agreement, were obligated.

In response to the oil spill in Alaska's Prince William Sound the Agency conducted on-site pilot research on bioremediation as an approach to clean-up of oil spills. Early results prompted Exxon to use bioremediation technology on many tidal beaches as one of its approaches to remediation of the oil spills.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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WATER QUALITY
Water Quality And Grants Program Management

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Water Quality Management						
Salaries & Expenses		$5,089.9	$5,146.9	$5,422.3	$6,730.0	$1,307.7
Abatement Control and Compliance		$1,417.6	$1,735.2	$2,174.8	$2,322.0	$147.2
	TOTAL	$6,507.5	$6,882.1	$7,597.1	$9,052.0	$1,454.9
Great Lakes Program						
Salaries & Expenses		$2,259.7	$2,901.9	$2,961.6	$3,214.3	$252.7
Abatement Control and Compliance		$7,596.1	$10,260.2	$10,129.3	$9,023.7	-$1,105.6
	TOTAL	$9,855.8	$13,162.1	$13,090.9	$12,238.0	-$852.9
Chesapeake Bay Program						
Salaries & Expenses		$1,509.5	$1,245.3	$1,241.2	$1,486.4	$245.2
Abatement Control and Compliance		$10,956.3	$11,585.2	$11,421.4	$10,698.8	-$722.6
	TOTAL	$12,465.8	$12,830.5	$12,662.6	$12,185.2	-$477.4
TOTAL:						
Salaries & Expenses		$8,859.1	$9,294.1	$9,625.1	$11,430.7	$1,805.6
Abatement Control and Compliance		$19,970.0	$23,580.6	$23,725.5	$22,044.5	-$1,681.0
Water Quality And Grants Program Management	TOTAL	$28,829.1	$32,874.7	$33,350.6	$33,475.2	$124.6
PERMANENT WORKYEARS						
Water Quality Management		93.1	105.7	104.8	122.7	17.9
Great Lakes Program		27.5	44.4	30.8	45.4	14.6
Chesapeake Bay Program		16.5	10.0	9.5	12.0	2.5
TOTAL PERMANENT WORKYEARS		137.1	160.1	145.1	180.1	35.0
TOTAL WORKYEARS						
Water Quality Management		98.6	105.7	108.7	122.7	14.0
Great Lakes Program		30.8	45.4	35.4	45.4	10.0
Chesapeake Bay Program		17.1	10.0	10.0	12.0	2.0
TOTAL WORKYEARS		146.5	161.1	154.1	180.1	26.0

WATER QUALITY

Water Quality and Grants Program Management

Budget Request

The Agency requests a total of $33,475,200 supported by 180.1 total workyears for 1991, an increase of $124,600 and an increase of 26.0 total workyears from 1990. Of the request, $11,430,700 will be for the Salaries and Expenses appropriation and $22,044,500 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,805,600 in the Salaries and Expenses appropriation and a decrease of $1,681,000 in the Abatement, Control and Compliance appropriation.

WATER QUALITY MANAGEMENT

1991 Program Request

The Agency requests a total of $9,052,000 supported by 122.7 total workyears for this program, of which $6,730,000 will be for the Salaries and Expenses appropriation and $2,322,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,307,700 in Salaries and Expenses, an increase of 14.0 workyears, and an increase of $147,200 in Abatement, Control and Compliance. The increases will support expanded efforts in the nonpoint source (NPS) pollution prevention and control program.

By 1991, EPA will have approved, disapproved or partially approved all state Section 319 NPS assessments and management programs. EPA will develop assessments where states fail to do so or where state assessments are disapproved, and states will implement approved elements of their NPS management programs. To support state implementation efforts, EPA will award grants to states to implement approved NPS management programs. EPA will also prepare technical NPS guidance documents, develop protocols to evaluate the effectiveness of Best Management Practices (BMPs) and document environmental results, and provide limited consultation to the states. The Agency will also leverage other Federal agencies' authorities and resources to help states implement NPS pollution prevention and control measures, and continue limited outreach to educate the public and build grass-roots support for NPS initiatives and innovative financing solutions.

Headquarters will help states use risk-based approaches to address impacts of NPS pollution on sensitive aquatic resources and habitat by refining risk assessment techniques to accurately account for NPS impacts, training Regions and states on use of risk assessment and management techniques and developing analytic methodologies and models for NPS pollution. Headquarters will also support Regional/state implementation of the agricultural elements of approved state NPS management programs by (1) developing improved techniques to evaluate state BMPs; (2) developing technical guidance on grazing BMPs; (3) sponsoring training on effectively coordinating the NPS program with other initiatives to prevent contamination of surface and ground water by agricultural chemicals; and (4) conducting a multi-agency technology transfer campaign on management of agricultural chemicals and nutrients by land owners. Headquarters and Regions will continue to coordinate Agency NPS activities with USDA's water quality initiative, taking advantage of USDA's extensive delivery system. Headquarters will assist Regions V, VII and X as they implement a special agricultural pollution prevention initiative (agricultural chemical management).

The Regions will provide direction and technical support to help states implement geographically-targeted agricultural NPS management programs, emphasizing prevention and control activities in specific watersheds at highest risk. Regions will also provide technical support to help states adopt risk-based management approaches to NPS pollution control, with special emphasis on estuaries, near coastal waters and wetlands at highest risk. Regions will assist states in: (1) using analytic methodologies to calculate load allocations; (2) designing and implementing prevention and control programs for urban runoff not regulated by stormwater permits; and (3) using the antidegradation provisions of state water quality standards to prevent NPS pollution in high quality waters.

Headquarters will oversee Regional efforts to manage funds to states through new cooperative agreements under Section 104(b)(3) and allocate Section 106 grant funds to states and qualified Indian tribes, with emphasis on building strong Indian tribal institutions fully capable of managing EPA grants.

1990 Program

In 1990, the Agency is allocating a total of $7,597,100 supported by 108.7 total workyears for this program, of which $5,422,300 is from the Salaries and Expenses appropriation and $2,174,800 is from the Abatement, Control and Compliance appropriation.

EPA approved 51 state Section 319 NPS assessment reports and is reviewing and approving all or portions of state management programs. EPA is working with states to upgrade and implement these programs by providing technical support, guidance and oversight. EPA is implementing its five year action plan to guide national nonpoint source activities to help states and local governments overcome barriers to successful implementation of NPS prevention and control measures. A final EPA report to Congress is being prepared summarizing the states' progress in implementing Section 319 requirements and recommending needed programmatic changes. Headquarters is also providing guidance on basic grants management functions for grants to states under Section 106 and Section 205, and evaluating the performance of selected Indian tribes' water quality programs.

The Regions continue to negotiate state work programs and manage grant funds under Sections 106 and 205(j)(5) to 203 state/interstate/regional organizations and qualified Indian tribes, ensuring that funds are used effectively and targeted carefully to meet critical water quality needs. To accomplish this, the Regions are issuing guidance and funding targets for specific priority activities, providing technical and management assistance, tracking and evaluating grantee performance and assuring that states meet their level-of-effort requirements.

The Agency is providing management oversight to 150 existing Clean Lake projects. EPA is also reviewing and approving state lake water quality assessments, preparing reports to Congress on the status of lake water quality and progress achieved under the Section 314(d) Demonstration Program, providing a technical supplement to the Lake and Reservoir Restoration guidance manual and continuing efforts to validate various restoration methodologies.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,507,500 supported by 98.6 total workyears for this program, of which $5,089,900 was from the Salaries and Expenses appropriation and $1,417,600 was from the Abatement, Control and Compliance appropriation.

Headquarters and the Regions initiated review, revision and approval of state NPS assessment reports and management programs and prepared an annual report to Congress summarizing the states' progress. Approximately 10 workshops and 10 consultations were provided to states on proven technologies for the design and implementation of watershed-level control systems. Regions negotiated and managed work programs for Section 205(j)(5) grants to 57 states and territories to complete development and begin implementation of NPS management programs. Program audits were conducted by Headquarters to assure national consistency.

Headquarters allocated Section 106 grant funds to Regions, states and qualified Indian tribes, provided guidance on basic program issues, conducted evaluations of Regional programs and evaluated the performance of selected Indian tribes. Regions continued to negotiate, award and manage Sections 106 and 205(j)(1) grant funds to 203 states, interstate organizations, regional organizations and qualified Indian tribes.

GREAT LAKES PROGRAM

1991 Program Request

The Agency requests a total of $12,238,000 supported by 45.4 total workyears for this program, of which $3,214,300 will be for the Salaries and Expenses appropriation and $9,023,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $252,700 in the Salaries and Expenses appropriation, a decrease of $1,105,600 in the Abatement, Control and Compliance appropriation, and an increase of 10.0 in total workyears. The increase in Salaries and Expenses supports the increase in total workyears. The decrease in Abatement, Control and Compliance reflects completion of major components of the Green Bay Mass Balance study and of the refitting of the research vessel, MARSEA 14. The increase in workyears reflects increased support for the state/local development and implementation of Remedial Action Plans (RAP) and the development of the Lakewide Management Plans (LAMP), as required in the Great Lakes Water Quality Agreement (GLWQA) with Canada.

Under the Clean Water Act (CWA) and GLWQA, the Great Lakes National Program Office (GLNPO) will continue to provide technical and management support for pollution prevention and control activities to protect critical habitats, surface water and ground-water. GLNPO and Regional technical support will be expanded for state/local development and implementation of RAPs for 30 United States Areas of Concern (AOC) identified by the International Joint Commission (IJC). In 1991, 27 of the 30 plans will be completed. In coordination with GLNPO, Regions II and V will continue to develop the LAMPs for Lake Ontario and Lake Michigan to address the problems of critical toxics, and will begin, with Region III, the work on the LAMP for Lake Erie.

GLNPO's Assessment and Remediation of Contaminated Sediments (ARCS) program will continue with pilot field demonstrations of promising technologies to abate contaminated sediment problems at several locations. Among the possible sites are Saginaw Bay, Sheboygan Harbor, Grand Calumet River, Ashtabula River, and Buffalo River. The ARCS projects, which will be allocated 40 percent of the program's funding, will support RAP implementation by determining feasible technologies for abatement of the contaminated sediment problems identified in most of the AOCs. The Agency's replacement research vessel, MARSEA 14, will be operational, and outfitting of the ship with laboratory modules for toxics monitoring needs will be completed. The Green Bay Mass Balance study will be completed, including a joint study with the National Oceanic and Atmospheric Administration (NOAA) on the Green Bay hydrology and sediment flux.

GLNPO will continue to coordinate with and provide oversight for Regions II, III, and V on water quality standards and on technical matters in the development and review of permits and permit compliance related to GLWQA requirements. Great Lakes monitoring and source assessment activities will continue through annual programs for conventional and toxic pollutants, for collection, analyses, and reporting on both open lake migratory and near shore non-migratory fish, and for collection of precipitation samples through the Great Lakes Atmospheric Deposition (GLAD) network for the analyses of metals, nutrients, and organic toxics. Surveillance activities will include continued open lake limnology and biological sampling, and continued air monitoring through the GLAD network. These analyses will be used to determine metals and nutrient loadings to the Great Lakes as a basis for the design and operation of pollution abatement programs.

GLNPO will continue development of the program's annual progress reports to Congress on implementation of the United States commitments under GLWQA. The program office will continue to convene and participate in bilateral United States/Canadian committees and task forces as the United States lead on GLWQA implementation. The program will provide technical support to EPA Headquarters and to the Department of State on official Canadian inquiries concerning the Great Lakes policies and programs of the United States government.

1990 Program

The Agency is allocating a total of $13,090,900 supported by 35.4 total workyears for this program, of which $2,961,600 is from the Salaries and Expenses appropriation and $10,129,300 is from the Abatement, Control and Compliance appropriation.

GLNPO, in cooperation with Regions II and V, provides technical support to state/local agencies to develop and begin implementation of RAPs, and 25 of the 30 plans are expected to be complete. The initial LAMP development work by Regions II and V, with the participation of GLNPO, begins with Lake Ontario and Lake Michigan. The ARCS program, which is allocated 40 percent of the program's funding, completes laboratory scale demonstrations of promising technologies and begins the preliminary work for the pilot scale demonstrations in the field. The technical protocols, site selection criteria, and procedures for the demonstrations are also complete. The refitting of the MARSEA 14 to Coast Guard specifications is being completed, outfitting the ship with laboratory modules for toxics monitoring begins and a Bay City home porting site is under evaluation. The Green Bay Mass Balance study continues developing predictive models for identification, transport, and fate of toxic substances. GLNPO begins a joint study with NOAA on the Green Bay hydrology and sediment flux.

The program office provides continuing technical support for and tracking of various state-level nonpoint source control programs to implement the United States phosphorus reduction plan. Regions II and V begin implementing the recommendations of the 1988 Nonpoint Source Reduction Plan Implementation Report called for under Annex 3 of the GLWQA, using CWA Section 319 authority. Great Lakes monitoring and source assessment activities continue through annual programs for conventional and toxic pollutants. Surveillance activities include continued open lake limnology and biological sampling, and operation of air monitoring stations in the GLAD network. GLNPO continues work on the development of the program's annual progress reports to Congress. Bi-national coordination and staff level working contacts on GLWQA implementation increases. GLNPO is to complete the negotiation of agreements, where needed, with appropriate Federal, state, local, and tribal agencies, as specified in the CWA.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,855,800 supported by 30.8 total workyears for this program, of which $2,259,700 was from the Salaries and Expenses appropriation and $7,596,100 was from the Abatement, Control and Compliance appropriation.

GLNPO provided direction and technical assistance to states in the development of RAPs, and RAPs for 15 of the 30 United States AOCs were completed. The preliminary field work and biological and chemical studies were completed for the ARCS program, which was allocated 40 percent of the Great Lakes program funding. Also, laboratory scale demonstrations of promising remedial technologies were begun. The specifications and contract bid proposal were developed for the overhaul and refitting of the MARSEA 14, which was acquired in December 1988.

GLNPO continued tracking nonpoint source pollution control practices and providing technical assistance and monitoring for the Great Lakes states' phosphorus reduction efforts, including elements of the 1986 U.S. Plan for Phosphorus Load Reduction to Lake Erie, Lake Ontario, and Saginaw Bay. Tributary monitoring for toxic pollutants was continued. The expansion of the GLAD network increased its analytical and research capabilities. Work continued on the Green Bay Mass Balance study and in the area of toxic source assessment.

GLNPO continued the negotiation of agreements with appropriate Federal, state, local, and tribal agencies, as specified in the CWA. Work continued on the preparation of the program's annual progress reports to Congress. Specific cooperative studies were conducted with NOAA to develop a research inventory. GLNPO published the results of the bi-national multi-agency Upper Great Lakes Connecting Channel study for use in developing the international RAPs for the St. Marys, St. Clair, and Detroit Rivers.

CHESAPEAKE BAY PROGRAM

1991 Program Request

The Agency requests a total of $12,185,200 supported by 12.0 total workyears for this program, of which $1,486,400 will be for the Salaries and Expenses appropriation and $10,698,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $245,200 in Salaries and Expenses, a decrease of $722,600 in Abatement, Control and Compliance, and an increase of 2.0 in total workyears. The increases in Salaries and Expenses and total workyears reflect increased activities related to toxics impacts on living resources and toxics monitoring. The decrease in Abatement, Control and Compliance reflects completion of nonpoint source control project grants and of studies required for the clean-up program for Rock Creek, a small tributary discharging to Baltimore Harbor, and for the Patuxent River Demonstration Site in Maryland.

Under the Clean Water Act (CWA) and the Chesapeake Bay Agreement (CBA), the Chesapeake Bay Liaison Office (CBLO) will continue to provide technical and management support for pollution prevention and control activities to protect critical habitats, surface water, and ground water. The Agency will continue to meet its expanded responsibilities under the CBA in concert with the three States of Pennsylvania, Maryland, and Virginia, the District of Columbia and the Chesapeake Bay Commission. The CBLO will continue management of state nonpoint source control and monitoring grants, and will provide overall program coordination, computer services/data management, administrative and public information support. Also, technical advisory services to the program's Executive Council, advisory committees, and subgroups established to carry out the terms of the CBA will be continued.

A review of the Bay monitoring program led by the CBLO will be completed. Program participants will assist in defining nutrient loads and contribute to reevaluation of the nutrients reduction goal and reassessment of costs. The goal of the basinwide nutrient reduction strategy is to achieve at least a 40 percent reduction from 1985 levels of nutrients entering the Bay's main stem by the year 2000. The CBLO and the U.S. Army Corps of Engineers will complete the time varying model for use in the reevaluation of the 40 percent nutrient reduction goal. Toxic studies, expanded monitoring data, pesticide management demonstrations and use surveys, analytical capabilities surveys, toxic loading inventories, and the continued implementation of the Basinwide Toxics Reduction Strategy will be used to refine and redirect the Strategy and improve regulatory efforts. The data from a CBLO pesticide survey will be analyzed and used to support improvements in the states' pesticide management programs. The CBLO will also develop a pesticide index and registry as a pollution prevention initiative to assist in reducing the risk of nonpoint source pesticide pollution.

The program will work with the Agency's Narragansett laboratory to expand toxics data to include atmospheric deposition data. Activities to ensure public involvement in protecting and restoring living resources and water quality will be continued. Reports, fact sheets, and media releases will also continue to be produced. The CBLO will also continue to be a participant and contributor to the Agency's ongoing Near Coastal Waters technology transfer activities.

1990 Program

The Agency is allocating a total of $12,662,600 supported by 10.0 total workyears for this program, of which $1,241,200 is from the Salaries and Expenses appropriation and $11,421,400 is from the Abatement, Control and Compliance appropriation.

One of the ongoing priorities of the program is the implementation of nonpoint source (NPS) nutrient pollution control projects for targeted drainage subbasins through annual state implementation grants. Investigations continue on nonpoint sources and impacts of toxics, with the concentration on sediments, the surface microlayer, and pesticides from land drainage. The work of the CBLO on toxics and related problems includes: development of the Toxics of Concern List; toxicity assessments of living resource habitats, particularly shallow nearshore habitats in cooperation with the Fish and Wildlife Service; estuarine sediment bioassay development and validation; and research on matters relating to ecological risk assessment, in cooperation with National Oceanic and Atmospheric Administration. CBLO is also undertaking a pesticides use survey based on the findings of the office's 1988 surface microlayer study, which showed that pesticides are impacting the microlayer.

The program redirection continues in order to meet the CBA commitments of the Bay states to reduce the level of nutrients in the Bay by 40 percent by the year 2000 and to meet the 1987 CWA requirements to look into problems of toxicity through the program's ongoing monitoring activities. Under the expanded CWA responsibilities and CBA commitments, the CBLO continues to provide technical and management leadership in nutrient reduction and the emerging problems of persistent toxics in the Bay basin. The CBLO also continues efforts to control nonpoint toxic sources, with the emphasis on continued implementation of the toxics strategy approved in December 1988. Efforts to improve compliance of Bay dischargers under the National Pollutant Discharge Elimination System continue through implementation of the Bay Compliance Initiative. The CBLO has initiated and in 1990 will complete two required Maryland studies -- the Rock Creek clean-up program study and the Patuxent River Demonstration Site study for pollution management and control.

1989 Accomplishments

In 1989, the Agency obligated a total of $12,465,800 supported by 17.1 total workyears for this program, of which $1,509,500 was from the Salaries and Expenses appropriation and $10,966,300 was from the Abatement, Control and Compliance appropriation.

The CBLO continued to work with the Bay states to implement the elements of the CBA. This included completion of the development policies and guidelines, a wetlands policy, a fish passage strategy, fishery management plans, and a plan to reduce and control toxic materials entering the Bay from point and nonpoint sources, and a plan to achieve point and nonpoint source reduction from Federal installations that parallel the states' load reduction.

The program support for monitoring the mainstem of the Bay continued in concert with the states' focus on monitoring the major tributaries. Continued support was provided for public outreach activities and for maintaining and improving the Chesapeake Bay data system.

WATER QUALITY
Effluent Standards & Guidelines

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Effluent Standards & Guidelines						
Salaries & Expenses		$3,228.6	$3,513.0	$3,126.7	$3,533.0	$406.3
Abatement Control and Compliance		$6,118.2	$6,042.6	$5,965.6	$9,463.6	$3,498.0
	TOTAL	$9,346.8	$9,555.6	$9,092.3	$12,996.6	$3,904.3
TOTAL:						
Salaries & Expenses		$3,228.6	$3,513.0	$3,126.7	$3,533.0	$406.3
Abatement Control and Compliance		$6,118.2	$6,042.6	$5,965.6	$9,463.6	$3,498.0
Effluent Standards & Guidelines	TOTAL	$9,346.8	$9,555.6	$9,092.3	$12,996.6	$3,904.3
PERMANENT WORKYEARS						
Effluent Standards & Guidelines		46.2	45.7	45.7	48.7	3.0
TOTAL PERMANENT WORKYEARS		46.2	45.7	45.7	48.7	3.0
TOTAL WORKYEARS						
Effluent Standards & Guidelines		48.9	45.7	45.7	48.7	3.0
TOTAL WORKYEARS		48.9	45.7	45.7	48.7	3.0

WATER QUALITY

Effluent Standards and Guidelines

Budget Request

The Agency requests a total of $12,996,600 supported by 48.7 total workyears for 1991, an increase of $3,904,300 and an increase of 3.0 total workyears from 1990. Of the request, $3,533,000 will be for the Salaries and Expenses appropriation and $9,463,600 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $406,300 in the Salaries and Expenses appropriation and an increase of $3,498,000 in the Abatement, Control and Compliance appropriation.

EFFLUENT STANDARDS AND GUIDELINES

1991 Program Request

In 1991, the Agency requests a total of $12,996,600 supported by 48.7 total workyears for this program, of which $3,533,000 will be for the Salaries and Expenses appropriation and $9,463,600 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $406,300 in Salaries and Expenses, an increase of 3.0 workyears and an increase of $3,498,000 in Abatement, Control and Compliance. The increases reflect a growing workload associated with meeting the Section 304(m) requirement to promulgate effluent guidelines for currently unregulated industries and pollutants.

The effluent standards and guidelines program will continue to develop controls or guidance for the unregulated industries and pollutants as identified in the Domestic Sewage Study (DSS). The Agency will propose regulations for the offshore oil and gas industry and the pesticides manufacturing industry, publish four draft technical guidance studies (timber, petroleum refining, waste oil recovery and textiles), initiate development of a draft technical guidance study for the steam electric industry and pursue development of regulations for three other unregulated industries cited by the DSS as contributing considerable quantities of hazardous and toxic wastes to publicly owned treatment works (POTWs) and surface waters (hazardous waste treaters (Phase II), industrial laundries and transportation cleaning).

As identified in the Section 304(m) notice, the Agency will continue to develop regulations for the following industries; hazardous waste treatment, machinery manufacturing and rebuilding, pesticides formulating/packaging, pharmaceuticals, coastal oil and gas, and pulp and paper. Work will continue on a proposed regulation for the remanded portion of the organic chemicals, plastics and synthetic fibers regulation (proposal FY 92). In addition, three technical guidance documents for the timber, textiles, and petroleum industries will be published. The remaining eight industrial categories, identified in the FY 90 Section 304(m) notice, will continue to be evaluated.

Analytical methods development will continue with the Sample Control Center providing analytical services (3,000 samples) required for regulatory development, enforcement activities, hazardous waste programs and Superfund activities. The Agency will also conduct an analytical methods conference; four comprehensive technical workshops for regional and state permit writers and POTW operators; and an international conference, to be co-sponsored by EPA and industry, on the application of pollution prevention practices in industrial wastewater treatment in the pesticides industry. As part of the Agency's overall emphasis on pollution prevention, the program will, in the process of effluent guidelines development, fully and effectively address pollution prevention, water conservation and cross-media impacts. Technology transfer will be expanded to promote rapid implementation of pollution prevention concepts and techniques.

1990 Program

In 1990, the Agency is allocating a total of $9,092,300 supported by 45.7 total workyears for this program, of which $3,126,700 is from the Salaries and Expenses appropriation and $5,965,600 is from the Abatement, Control and Compliance appropriation.

In FY 90, the Agency published the Section 304(m) notice that committed the Agency to promulgate new or revise existing regulations for nine major industrial categories. Schedules for the nine rulemaking actions were included in the notice. In addition, the notice identified eleven industrial categories the Agency would continue to study. The Agency published guidance documents or data summaries for thirteen industrial categories including; coastal/onshore/stripper oil and gas, drum reconditioning, hazardous waste treatment, hospitals, industrial laundries, machinery manufacturing and rebuilding, paint, pesticides, pharmaceuticals, pulp and paper, solvent recycling, transportation, and used oil reclamation and re-refining.

Analytical methods development and validation continues for the analysis of pesticides, chemicals reported under Title III of the Superfund Amendment Reauthorization Act, and toxic and hazardous pollutants subject to the Resource Conservation and Recovery Act. The Sample Control Center continues to provide a wide diversity of analytical capability services to support effluent guidelines development and other Agency programs, such as the Chesapeake Bay microlayer sampling, the National Sewage Sludge Survey, biomonitoring and bioaccumulation methods and sampling analyses, stormwater survey, and toxicity reduction evaluation studies for permitting and enforcement activities. The program is also publishing the "List of Lists," which presents an integrated and continually up-to-date list of Agency-wide pollutants of concern and identifies those for which analytical methods are available.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,346,800 supported by 48.9 total workyears for this program, of which $3,228,600 was from the Salaries and Expenses appropriation and $6,118,200 was from the Abatement, Control and Compliance appropriation.

The effluent guidelines program continued regulations development for four industrial categories: pesticide manufacturing, pesticide formulating/packaging, pulp and paper manufacturing, and offshore oil and gas extraction. A Federal Register notice of data availability was published for the coastal oil and gas extraction subcategory, as part of the program's pre-regulation effort for that industry. Headquarters continued to study and initiate the development of regulations for the machinery manufacturing and rebuilding industry, hazardous waste treaters industry and pharmaceuticals industry. Data gathering and analysis were initiated on one previously regulated industry (onshore oil and gas).

Headquarters also provided post-promulgation negotiation and litigation support for placer gold mining and the nonferrous forming and manufacturing phase II regulatory amendments, and continued support for the organic effluent limitations published in 1987. Comprehensive technical policy workshops were conducted covering the progress of the pesticides regulations, the effluent limitations associated with the organic regulations, findings of analytical studies and the DSS industries, and the oil and gas regulatory efforts.

WATER QUALITY
Grants Assistance Programs

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Clean Lakes Program						
Abatement Control and Compliance		$9,024.4	$8,860.8	$8,747.7		-$8,747.7
	TOTAL	$9,024.4	$8,860.8	$8,747.7		-$8,747.7
Control Agency Resource Supplementation (Section 106)						
Abatement Control and Compliance		$67,472.5	$73,540.4	$72,599.1	$81,700.0	$9,100.9
	TOTAL	$67,472.5	$73,540.4	$72,599.1	$81,700.0	$9,100.9
Water Quality Management Cooperative Agreements						
Abatement Control and Compliance					$16,500.0	$16,500.0
	TOTAL				$16,500.0	$16,500.0
TOTAL:						
Abatement Control and Compliance		$76,496.9	$82,401.2	$81,346.8	$98,200.0	$16,853.2
Grants Assistance Programs	TOTAL	$76,496.9	$82,401.2	$81,346.8	$98,200.0	$16,853.2

WATER QUALITY

Grants Assistance Programs

Budget Request

The Agency requests a total of $98,200,000 for 1991. All of this request will be for the Abatement, Control and Compliance appropriation. This represents an increase of $16,853,200 from 1990.

CLEAN LAKES PROGRAM

1991 Program Request

The Agency requests no funding for this program in 1991, which represents a decrease of $8,747,700 in the Abatement, Control and Compliance appropriation. In past years, the Agency has developed and demonstrated lake restoration techniques and assisted states in classifying lakes, identifying techniques for restoring the levels of water quality needed to maintain or enhance uses, and implemented cleanup and control projects. Because the Agency has provided guidance to the states on maintaining clean lakes, it believes that the states are now able to address lake restoration needs, along with other local priorities, under their existing water quality management programs.

1990 Program

In 1990, the Agency is allocating a total of $8,747,700 for this program, all of which is from the Abatement, Control and Compliance appropriation.

In 1990, the Clean Lakes program supports state-EPA cooperative agreements under Section 314 of the Clean Water Act. The agreements are being used to support the highest priority Phase I lake diagnostic feasibility studies, Phase II implementation activities to restore and protect lake water quality and Phase III post-restoration monitoring projects to enhance the scientific basis for various lake restoration methodologies. Approximately 100 projects are being selected based on an evaluation of the environmental and public benefits of state Clean Lakes proposals.

1989 Program

In 1989, the Agency obligated a total of $9,024,400 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Under the nationally competitive Clean Lakes Program, the Agency provided financial assistance to conduct 40 state and 3 Indian tribal lake water quality assessments to evaluate the status and trends in lake water quality, establish a basis for state/tribal programs and Federal assistance needs and provide the Agency with data to determine future program direction. Forty-five diagnostic/feasibility studies and lake restoration and protection implementation projects were conducted to determine causes and sources of pollution to lakes and implement measures to restore and protect lake water quality. Three post-restoration monitoring studies were initiated to advance the science of lake restoration, validate methodologies and determine the longevity and effectiveness of restoration/protection measures.

Under the Demonstration Program, the Agency conducted seven projects meeting the legislative objectives of Section 314 of the Act, and assistance was provided consistent with the Clean Lakes Regulation (40 CFR, Part 35, subpart H).

CONTROL AGENCY RESOURCE SUPPLEMENTATION (SECTION 106)

1991 Program Request

In 1991, the Agency requests a total of $81,700,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $9,100,900 from 1990 to partially offset the loss of grant funding previously available under the construction grant set-asides.

Section 106 grants will continue to provide funding assistance for water pollution control programs operated by 63 state, interstate and territorial agencies and approximately 30 Indian tribes. Grantees will complete implementation of Section 304(l) water quality-based controls for toxic discharges in high priority waters, assess water quality conditions and trends and conduct comprehensive monitoring (including water column, fish tissue and sediment) to identify sites impacted by toxic pollutants and areas needing controls on a high priority basis. Grantees will continue to administer water quality standards programs that focus on new standards for toxic pollutants based on EPA water quality criteria and review of standards, as required by the statute.

States (and Indian tribes that qualify as states) will emphasize reissuance of expiring National Pollutant Discharge Elimination System (NPDES) permits that incorporate toxic/toxicity-based limits and will modify other permits to incorporate new limits based on the findings from earlier analyses. Grantees will also focus on selected, high priority permit modifications for publicly owned treatment works (POTWs) to address pretreatment requirements. In 1991, grantees will focus permitting, compliance and enforcement activities in waters at highest risk, particularly in critical aquatic habitats.

States (and Indian tribes that qualify as states) will develop and implement ground-water protection activities that move the states beyond protection strategies to comprehensive ground-water protection programs. States will also enhance their efforts to incorporate wellhead protection activities and pesticide management plans into their comprehensive ground-water protection programs.

1990 Program

In 1990, the Agency is allocating a total of $72,599,100 for this program, all of which is from the Abatement, Control and Compliance appropriation.

Section 106 grants continue to provide funding assistance for water pollution control programs operated by 63 state, interstate and territorial agencies and approximately 30 Indian tribes. In 1990, states continue to review water quality standards and adopt numeric and/or narrative water quality standards for toxic pollutants and toxicity, as appropriate. States are determining whether "new" or additional waters need to be listed under Section 304(l), and are completing assessments for rivers, lakes, estuaries, wetlands and marine waters. Monitoring and assessment data are being used to establish priorities for needed control measures, to develop wasteload allocations for permits and to increase sediment contamination information.

States are modifying, issuing or reissuing NPDES permits to incorporate limits for toxic pollutants and/or toxicity in water quality-based or technology-based permits. States are also issuing permits for combined sewer overflows and sludge controls, where needed. States are being encouraged to assume pretreatment program delegations, improve reporting where the state is the POTW control authority, inspect POTWs to determine compliance status and initiate enforcement actions against inadequate POTW implementation and/or industrial user noncompliance.

To ensure compliance of NPDES-permitted facilities, states continue an effective assessment, monitoring and enforcement program, focusing on controlling toxic pollutants and protecting municipal infrastructure. Industrial enforcement actions and NPDES and pretreatment inspections include toxicity reduction evaluation methodologies. National Municipal Policy follow-up enforcement actions focus on municipalities that fail to meet their construction schedules.

Ground-water protection activities are receiving a total of $10,885,485 for support of state efforts to develop comprehensive ground-water protection programs which set priorities and integrate efforts to manage and control actual and potential sources of contamination. As part of their programs, state water agencies are developing hydrogeologic aspects of pesticides management plans, which provide protection methods tailored to area-specific differences in ground-water vulnerability. In addition, state wellhead protection (WHP) programs are being developed as key components of state comprehensive ground-water protection programs. In developing and implementing WHP programs, states play an active role in protecting a very important sub-set of their ground-water resources, i.e., ground waters that supply drinking water to public water systems.

1989 Accomplishments

In 1989, the Agency obligated a total of $67,472,500 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Section 106 grants provided funding assistance for operation of state water pollution control programs for 63 state, interstate and territorial agencies, and approximately 30 Indian tribes. States resolved complex use/criteria revision and modification issues, reviewed antidegradation policies and developed implementation methods, placing special emphasis on determining priority water segments requiring site-specific criteria. States completed lists of waters impaired by toxic discharges and developed individual control strategies to comply with requirements of Section 304(l).

Expiring NPDES permits were issued/reissued by states with water quality-based limits to control toxic pollutants and toxicity and to incorporate biomonitoring requirements. A number of unexpired NPDES permits where Section 304(l) assessments had been completed and the need for toxic controls was determined were also modified. States developed sludge programs and worked with

EPA to incorporate sludge limits and/or impose biomonitoring requirements on some NPDES permits for POTWs and/or other sludge handling facilities. States assisted POTWs with approved local pretreatment programs and to develop and modify new and revised categorical standards and local limits to control toxic/hazardous pollutants. Audits were conducted to determine the adequacy of local pretreatment programs.

In the NPDES enforcement program, states concluded the National Municipal Policy effort primarily by use of judicial actions to set schedules for facilities that missed the July 1, 1988, deadline for compliance. In pretreatment enforcement, states ensured that industrial users complied with categorical standards and that local control authorities complied with provisions of their approved programs. States conducted pretreatment compliance inspections and ensured that POTWs had adequate control mechanisms in place. They continued to conduct both sampling and non-sampling inspections and to use penalties to enforce Best Achievable Technology and water quality-based permit requirements to address critical water-quality objectives.

States completed and revised their nonpoint source management programs to reflect EPA review. States reviewed and refined their ground-water protection strategies to determine the measures needed to protect ground-water resources, particularly in relationship with the uses of this resource.

WATER QUALITY MANAGEMENT COOPERATIVE AGREEMENTS

1991 Program Request

The Agency requests a total of $16,500,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $16,500,000 from 1990 to support state permitting, enforcement and water quality management activities. This funding will partially offset the reductions in Federal grant funds available to states under the construction grant set-asides, which no longer exist after 1990.

Section 104(b)(3) of the Clean Water Act (CWA) allows EPA to make grants to state water pollution control agencies through cooperative agreements to conduct and promote investigations, experiments, training exercises, demonstrations and surveys to determine the causes, effects and extent of pollution. It also allows EPA to institute measures to prevent, reduce and eliminate pollution.

Although grant funds will be available to states for activities previously funded under the set-asides, funds will be targeted to states that commit to achieving concrete results, with the understanding that the funds will serve as "seed money" to help states address many of the newer CWA requirements.

Cooperative agreements will be negotiated with states that have assumed full responsibility for administering the National Pollutant Discharge Elimination System (NPDES) and/or pretreatment programs. Funds will be made available for specific activities related to permits, pretreatment and enforcement. Specifically, eligible activities include upgrading NPDES permitting and pretreatment programs to ensure consistency with current statutory and regulatory requirements and developing and implementing new state sludge management programs. States may also finance the development of new complex permits with requirements for combined sewer overflows, stormwater discharges, sludge disposal, pretreatment and pollution prevention. Activities to upgrade local pretreatment programs to ensure consistency with new regulatory requirements for toxics and hazardous wastes and to improve compliance with permit limits and requirements are also eligible for funding. Finally, states may finance NPDES permit enforcement actions.

In addition, funds will be available to all states to perform activities related to control of toxic pollutants and protection of coastal and wetland resources. Specifically, funds will be used by states to adopt new water quality standards based on EPA water quality criteria for toxic pollutants and on criteria for salt water and wetlands. Funds may also be used by states to conduct special monitoring to support water quality-based controls for toxic pollutants and for facilities that discharge into salt waters and wetlands.

1990 Program

No funds are allocated for this program in 1990.

1989 Accomplishments

No funds were obligated for this program in 1989.

WATER QUALITY
Water Quality Strategies Implementation

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Wetlands Protection						
Salaries & Expenses		$4,681.1	$5,081.0	$5,273.4	$8,434.5	$3,161.1
Abatement Control and Compliance		$3,035.7	$3,529.0	$3,478.8	$5,413.0	$1,934.2
	TOTAL	$7,716.8	$8,610.0	$8,752.2	$13,847.5	$5,095.3
Wetlands Program Implementation						
Abatement Control and Compliance			$1,230.7	$1,215.0	$5,000.0	$3,785.0
	TOTAL		$1,230.7	$1,215.0	$5,000.0	$3,785.0
Ocean Disposal Permits						
Salaries & Expenses		$2,400.6	$3,860.8	$3,367.4	$2,580.6	-$786.8
Abatement Control and Compliance		$5,865.7	$8,144.8	$7,999.0	$6,906.9	-$1,092.1
	TOTAL	$8,266.3	$12,005.6	$11,366.4	$9,487.5	-$1,878.9
Environmental Emergency Response & Prevention						
Salaries & Expenses		$2,019.2	$1,527.0	$1,763.6	$2,365.0	$601.4
Abatement Control and Compliance		$1,893.1	$1,164.7	$1,150.0	$4,682.8	$3,532.8
	TOTAL	$3,912.3	$2,691.7	$2,913.6	$7,047.8	$4,134.2
Spill Restoration Program						
Salaries & Expenses			$883.6	$871.8		-$871.8
	TOTAL		$883.6	$871.8		-$871.8
Standards & Regulations						
Salaries & Expenses		$4,400.4	$4,783.0	$4,604.5	$5,432.1	$827.6
Abatement Control and Compliance		$3,316.5	$4,666.3	$4,132.8	$4,341.9	$209.1
	TOTAL	$7,716.9	$9,449.3	$8,737.3	$9,774.0	$1,036.7
Nonpoint Source Management Grants						
Abatement Control and Compliance			$37,411.1	$36,933.1	$14,250.0	-$22,683.1
	TOTAL		$37,411.1	$36,933.1	$14,250.0	-$22,683.1
Nonpoint Source Implementation						
Abatement Control and Compliance			$1,969.1	$1,944.1	$750.0	-$1,194.1
	TOTAL		$1,969.1	$1,944.1	$750.0	-$1,194.1
TOTAL:						
Salaries & Expenses		$13,501.3	$16,135.4	$15,880.7	$18,812.2	$2,931.5
Abatement Control and Compliance		$14,111.0	$58,115.7	$56,852.8	$41,344.6	-$15,508.2

WATER QUALITY
Water Quality Strategies Implementation

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Water Quality Strategies Implementation	TOTAL	$27,612.3	$74,251.1	$72,733.5	$60,156.8	-$12,576.7
PERMANENT WORKYEARS						
Wetlands Protection		96.4	111.6	108.4	161.6	53.2
Ocean Disposal Permits		39.7	65.1	53.3	50.3	-3.0
Ocean Dumping Fund					10.0	10.0
Environmental Emergency Response & Prevention		36.5	36.8	35.0	46.8	11.8
Spill Restoration Program			16.0			
Standards & Regulations		79.3	94.7	88.6	98.0	9.4
TOTAL PERMANENT WORKYEARS		251.9	324.2	285.3	366.7	81.4
TOTAL WORKYEARS						
Wetlands Protection		98.8	111.6	111.6	161.6	50.0
Ocean Disposal Permits		42.4	65.1	55.1	50.3	-4.8
Ocean Dumping Fund					10.0	10.0
Environmental Emergency Response & Prevention		39.8	36.8	36.8	46.8	10.0
Spill Restoration Program			16.0			
Standards & Regulations		83.6	94.7	91.7	98.0	6.3
TOTAL WORKYEARS		264.6	324.2	295.2	366.7	71.5

WATER QUALITY

Water Quality Strategies Implementation

Budget Request

The Agency requests a total of $60,156,800 supported by 366.7 total workyears for 1991, a decrease of $12,576,700 and an increase of 71.5 total workyears from 1990. Of the request, $18,812,200 will be for the Salaries and Expenses appropriation and $41,344,600 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,931,500 in the Salaries and Expenses appropriation and a decrease of $15,508,200 in the Abatement, Control and Compliance appropriation.

WETLANDS PROTECTION

1991 Program Request

The Agency requests a total of $13,847,500 supported by 161.6 total workyears for this program, of which $8,434,500 will be for the Salaries and Expenses appropriations and $5,413,000 will be for the Abatement, Control and Compliance Appropriation. This represents an increase of $3,161,100 and $1,934,200 respectively, and an increase of 50.0 workyears. The increases reflect the Agency's support for achieving the President's goal of no net loss of wetlands and several other major Presidential initiatives: state capacity, enforcement, and protection of critical habitats.

The highest priority of the wetlands program will be to achieve the President's goal of no net loss of wetlands through implementation of the recommendations of the Domestic Policy Council Wetlands Task Force, a stronger Section 404 program, and assisting states to develop effective wetland protection programs. The program's field presence will be greatly strengthened by the increased workyears in the Regional offices and the availability of increased financial assistance to states.

During 1991, a major component of a strong Section 404 program will be the enhanced field presence of the Agency and an increasingly cooperative working relationship with the Army Corps of Engineers. The program will continue to implement the memoranda of agreement (MOA) with the Corps on mitigation policy, enforcement, and delineation of jurisdictional wetlands. EPA will be monitoring restoration activities occurring under the mitigation MOA. Section 404 enforcement activities will be augmented by an aggressive public outreach/media campaign to inform the public and the regulated community of the values and functions of wetlands and the consequences of their destruction or degradation. The program will be working with the Marine and Estuarine Protection Program to implement the improved test methods and procedural guidance on sediment criteria and disposal of dredged material in coastal waters. These efforts will ensure that wetlands, rivers, lakes and coastal/marine waters will be subject to the same standards and equal levels of protection.

Increased funding assistance will be provided for states to encourage state program assumption and development of state comprehensive wetlands protection plans. Other state activities to promote wetlands protection will include the use of the Section 401 water quality certification process and development of state water quality standards for wetlands. EPA will continue to assist in the development of local programs through the Regions and states and issuance of information/technology transfer. Continued focus will be placed upon anticipatory approaches to wetlands protection including advance identification. The Agency will implement a variety of projects aimed at protecting special wetland ecosystems such as coastal Louisiana and western riparian wetlands.

The Agency will work with other Federal and state agencies on education and technical assistance aimed at abating the high loss of wetlands through agricultural uses. Since EPA has limited regulatory powers in this area, forming partnerships with others is a key to success. EPA will disseminate new technical tools emerging from the Agency's research efforts in 1989 and 1990 in the areas of restoration, cumulative impact assessments, and long term monitoring of wetlands "health." EPA will play an increasing role in international activities, seeking opportunities to share U.S. experience and expertise with others, especially developing countries.

1990 Program

In 1990, the Agency is allocating a total of $8,752,200 supported by 111.6 total workyears for this program, of which $5,273,400 is for the Salaries and Expenses appropriation and $3,478,800 is for the Abatement, Control and Compliance appropriation.

In 1990, the Agency continues to work with the Corps of Engineers and other Federal agencies in issuing policies and procedures to clarify or amplify Federal regulatory requirements of the Section 404 program. Implementation of the enforcement and jurisdictional MOA, the administrative penalty authorities, the EPA wetlands delineation manual, the 404(c) procedural guidance, and the bottomland hardwood guidance is occurring. The program is issuing final regulations so that qualified and approved Indian Tribes may administer the Section 404 program.

The Agency is supporting the work of the Domestic Policy Council's Task Force on Wetlands to develop a policy for implementing the President's goal of "no net loss" of Wetlands. The Agency continues to work with other Federal agencies on a variety of Federal wetlands protection issues including streamlining the Section 404 regulatory process, improving Federal land management practices, and strengthening the knowledge and science of wetlands. In particular, EPA is participating on the Interagency Floodplain Task Force to demonstrate the use of integrated floodplain management planning for reducing flood losses and erosion, protecting wetlands, providing recreational opportunities, and improving stream water quality.

Major activities in 1990 include more intensive efforts aimed at state wetlands protection programs, the use of anticipatory approaches for wetlands protection, and aggressive enforcement activities. State interest in wetlands protection activities is increasing due to increased public knowledge of the importance of wetlands and the availability of a small amount of "seed" grant funding for pilot state programs. The Agency is holding training workshops involving state personnel on Section 404 regulations and enforcement, the delineation methodology, water demand management, and use of planning/negotiation techniques. The Agency is working with states as they revise their 401 water quality certification processes to reflect wetlands values and functions.

The Agency is continuing its use of anticipatory approaches for wetlands protection, particularly in areas where loss rates continue to be unacceptably high and traditional program tools are not satisfactorily addressing the problem.

Enforcement activities are expanding in 1990, building upon new directions and experience gained under a new enforcement memorandum of agreement with the Army, new guidance on the use of administrative civil penalties, an expanding EPA criminal enforcement program, and greater field experience. The use of administrative penalty orders is increasing commensurate with these changes and priorities, and with the Agency's enhanced ability to detect violations through remote sensing, citizen awareness, and improved interagency networks of Federal and state field personnel.

In 1990, the program is working with the Marine and Estuarine Protection Program to develop improved test methods and procedural guidance on sediment criteria and disposal of dredged material in coastal waters. The criteria and guidance should apply equally to material disposed of in wetlands, rivers, lakes and coastal/marine waters.

1989 Accomplishments

In 1989, the Agency obligated a total of $7,716,800 supported by 98.8 total workyears for this program, of which $4,681,100 was from the Salaries and Expenses appropriation and $3,035,700 was from the Abatement, Control and Compliance appropriation.

The Agency made major strides in streamlining the Section 404 regulatory program during 1989. It issued MOA with the Army Corps of Engineers on enforcement and on determination of geographic jurisdiction and Section 404(f) exemptions. EPA, the Corps, Soil Conservation Service, and the U.S. Fish and Wildlife Service also agreed upon common testing protocols in the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands." Training for EPA's Regions and states was held on Section 404 enforcement and the jurisdictional delineation methodology. During 1989, the Regional programs used public outreach/media campaigns on their enforcement activities as very effective tools in preventing further destruction and degradation of wetlands.

In 1989, EPA continued to place heavy emphasis upon comprehensive planning and other anticipatory approaches to wetlands protection. A total of 58 advance identification actions were completed, ongoing, or planned. River corridor/floodplain management activities were tested at a number of locations.

The Agency continued to assist states as they examined the feasibility of assuming administration of the Section 404 program or otherwise develop statewide wetlands protection programs. EPA issued a "Handbook on Section 401 Certification" to help states use the Clean Water Act's water quality certification process as a tool for wetlands protection. The Agency assisted several states to assess vulnerable wetlands (cumulative impact assessments) and develop narrative water quality standards for wetlands. New regulations were proposed that would allow Indian tribes to assume administrative responsibility for the Section 404 program.

The Agency supported efforts by the Domestic Policy Council's Task Force on Wetlands to develop a policy to achieve the President's goal of "no net loss" of wetlands.

WETLANDS IMPLEMENTATION PROGRAM

1991 Program Request

The Agency requests a total of $5,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,785,000. The increase reflects the Agency's support for achieving the President's goal of "no net loss" of wetlands and several other major Presidential initiatives: state capacity, enforcement, and protection of critical habitats.

The wetlands implementation program will provide increased grant assistance to states and Indian tribes for research, investigations, experiments, training, demonstrations, surveys, and studies for the protection of wetlands from pollution under Section 104 of the Clean Water Act. One of the major avenues to achieving the President's goal of "no net loss" of wetlands is through increasing the roles and responsibilities of state governments and Indian tribes in wetlands protection. Grant assistance will allow many states and Indian tribes to acquire basic information and data on their wetlands resources, the risks posed to these resources, examine a wide variety of techniques for protection for these critical resources, and develop comprehensive wetlands protection plans that may combine watershed, nonpoint source, river corridor, estuary/coastal management and other critical habitat protection initiatives. States will undertake aggressive public outreach/education campaigns in concert with local government planning and protection measures.

1990 Program

In 1990, the Agency is allocating a total of $1,215,000 for this program, all of which is for the Abatement, Control and Compliance appropriation.

During 1990, grants are being made available to states and Indian tribes under a wetlands implementation program for the first time. In 1989 and in previous years, the Agency's wetlands protection program has provided small amounts of "seed" money to a limited number of states and one Indian tribe to examine the feasibility of assuming administration of the Section 404 program. The State of Michigan is the only state that has assumed the program, which in other states is jointly administered by the Corps of Engineers and EPA. In 1990, examples of the ways in which states are increasing their wetlands protection activities include: evaluation of existing statutory and regulatory programs; development of narrative water quality standards for wetlands; incorporation of wetlands protection in the Section 401 water quality certification process; and identification of wetland resources, their functions, and priorities.

1989 Accomplishments

No resources were provided to this program in 1989.

OCEAN DISPOSAL PERMITS

1991 Program Request

The Agency requests a total $9,487,500 supported by 60.3 total workyears for this program, of which $2,580,600 will be for the Salaries and Expenses appropriation and $6,906,900 will be for the Abatement, Control and Compliance appropriation. Total workyears will include 50.3 from the Salaries and Expenses appropriation and 10.0 will be from the Ocean Dumping Fund. This represents a decrease of $786,800 in Salaries and Expenses, a decrease of $1,092,100 in Abatement, Control and Compliance, a decrease of 4.8 in total Salaries and Expenses workyears, and an increase of 10.0 total workyears from the Ocean Dumping Fund. The decreases in Salaries and Expenses and workyears reflect the transfer of funding for workyears provided for the Ocean Dumping Ban Act (ODBA) from the Salaries and Expenses appropriation to the Ocean Dumping Fund. The decrease in Abatement, Control and Compliance reflects the completion of the studies needed to develop the Ocean Dumping regulation proposal. The addition of workyears supported by ODF reflects additional Headquarters and Regional site management, monitoring, and surveillance, and monitoring of compliance with enforcement agreements required under ODBA.

The Agency will propose revised Ocean Dumping (OD) regulations on disposal site designation and dredged material disposal, and will initiate a proposal for regulations on disposal of other materials. This will include Headquarters' support for Regional implementation of the regulations through training and technical assistance. The Regional role in disposal site management and monitoring will be expanded to ensure compliance and enforcement of ocean dumping criteria and permit requirements. Headquarters will continue work to control marine debris through identification of sources and the development of reduction strategies. Additional support for Region II will be continued for monitoring of nearshore waters to address the continuing problems on the New York-New Jersey beaches. Region II will complete the final New York Bight Restoration Plan and a draft of the New York Mud Dump Site study.

The Agency will meet the requirements of ODBA to protect the marine environment at the 106 Mile Site (deepwater municipal sludge dump site) off the New Jersey coast. In support of these requirements, Headquarters and Region II will expand management, monitoring, and surveillance of the site in coordination with the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Coast Guard (USCG). These activities will also ensure that the remaining sludge dumpers comply with their enforcement agreements.

The Regions will have a more intensive role in the development of environmental impact statements (EIS) for ocean dredged material disposal sites, and in site management and monitoring. Ongoing management responsibilities of the Regions will increase as more interim dredged material disposal sites are designated as final sites. There will be further emphasis on data management as the number of continuing and comprehensive site monitoring programs increases.

To implement the goals of the National Coastal and Marine Policy (NCMP), the Agency, in cooperation with other Federal agencies, will begin to develop a compliance and enforcement improvement initiative to reduce risk to human health and aquatic life. This program will include guidance, training, public awareness, and support from Headquarters for Regional permit and regulatory compliance and enforcement actions. The Agency will work with the Corps of Engineers (COE) to develop improved procedures for identifying illegal ocean dumping of dredge materials, and will work with NOAA and USCG on improving surveillance. In addressing the NCMP goal of international leadership, the Agency will continue to participate in activities under the London Dumping Convention, the International Convention for the Prevention of Pollution from Ships (MARPOL), and the Cartegena Convention to preserve the coastal and marine environments.

1990 Program

The Agency is allocating a total $11,366,400 supported by 55.1 total workyears for this program, of which $3,367,400 is from the Salaries and Expenses appropriation and $7,999,000 is from the Abatement, Control and Compliance appropriation.

The Agency continues to develop revised OD regulations to respond to statutory amendments and lawsuits. Headquarters is developing sediment testing protocols and a comprehensive, risk-based management strategy to bring the Marine Protection Research and Sanctuaries Act Section 103 program and the Clean Water Act Section 404 program into harmony. In addition, Headquarters is developing a compliance and enforcement strategy for the OD program.

Technical guidance and training continues to be provided to support the Regions' expanded role in the development of EISs for the COE and to support ongoing site management and monitoring activities. The Agency continues to support the resolution of concerns on dredging requirements of the U.S. Navy's Homeporting programs. Region II continues to develop the New York Bight Restoration Plan and the New York Mud Dump Site alternative study. In addition, Headquarters and Region II, in cooperation with USCG and NOAA, are developing and implementing an expanded monitoring plan for the 106 Mile Site and related other sites, as required by ODBA. Headquarters undertakes work to control marine debris through identification of sources and the development of reduction strategies. The Agency continues to participate in international efforts to preserve the coastal and marine environments through activities under the London Dumping Convention and other international agreements.

1989 Accomplishments

The Agency obligated a total of $8,266,300 supported by 42.4 total workyears for this program, of which $2,400,600 was from the Salaries and Expenses appropriation and $5,865,700 was from the Abatement, Control and Compliance appropriation.

The Agency continued development of a comprehensive revision to the OD regulations and development of program guidance and technical protocols, as required by statutory amendments and court judgments. Most of the coastal Regions completed negotiations and began implementation of memoranda of understanding (MOU) with the appropriate COE District offices to prepare dredged material disposal site EISs and site designations. Headquarters and Region II began increased monitoring of the 106 Mile Site in response to ODBA requirements.

Work continued in Region II on preparation of the New York Bight Restoration Plan, and two other studies, one relating to the selection of an alternative disposal site to replace the New York Mud Dump Site and a second to determine the resolution of the problem of plastics disposal in the New York Bight. In addition, Headquarters and Region II continued work on a study with NOAA on the adverse effects of the improper disposal of plastic articles on the marine environment and on methods to reduce the amount of plastic debris. Also, they continued a public outreach and education program in cooperation with NOAA and USCG, on the problems of plastic debris in the marine environment and the need for reduction of such debris. The Agency continued to participate in international efforts to preserve the coastal and marine environments through activities under the London Dumping Convention and other international agreements.

ENVIRONMENTAL EMERGENCY RESPONSE AND PREVENTION

1991 Program Request

The Agency requests a total of $7,047,800 supported by 46.8 total workyears for this program of which $2,365,000 will be for the Salaries and Expenses appropriation and $4,682,800 will be for the Abatement, Control and Compliance appropriation. This reflects an increase of $601,400 in Salaries and Expenses, an increase of $3,532,800 in Abatement, Control and Compliance,and an increase of 10.0 workyears from 1990.

Additional resources will be used to improve and enhance the Agency's ability to prepare for and respond to major inland oil spills, especially those in or near environmentally sensitive areas. The Agency will also use the resources to complete the Phase I amendments to the Spill Prevention, Countermeasure and Control (SPCC) regulations, which will require facility operators to have adequate contingency and response plans if an oil spill were to breach the preventive measures taken at the site.

The Agency will remain on a 24-hour alert to receive notifications of accidental releases of oil and other petroleum products. It will continue to direct and monitor removals at major oil incidents. EPA will also monitor removals by potentially responsible parties (PRP) or state and local authorities, and it will provide technical assistance to the U.S. Coast Guard on coastal oil spills when the Emergency Response Team (ERT) is activated or when the U.S. Coast Guard makes a specific request.

In addition, the Agency will: 1) develop guidelines and procedures for targeting inspection and enforcement efforts on facilities where spills could result in significant or severe environmental consequences; and 2) conduct inspections and follow-up activities at 100 of these targeted facilities. The Agency will implement the recommendations from the recent On-Scene Coordinators' Readiness Task Force, which include: 1) arranging and conducting a greater number of response simulations and exercises; 2) reviewing selected state and local contingency plans; and 3) working with industrial personnel to pre-stage oil spill cleanup equipment near environmentally sensitive areas.

1990 Program

In 1990, the Agency is allocating a total of $2,913,600 supported by 36.8 total workyears for this program, of which $1,763,600 is from the Salaries and Expenses appropriation and $1,150,000 is from the Abatement, Control and Compliance appropriation.

The Agency continues to handle and monitor oil spill notifications; direct response operations at major inland waterway oil spills where there is no other governmental or private entity able or willing to respond; conduct SPCC inspections at facilities where there is some indication that problems exist with the contingency plan and/or plan implementation; and monitor on-scene removal activities of PRPs or state and local authorities at major spills. Moreover, the Agency updates contingency plans; provides advice and technical guidance to state and local officials and PRPs involved in spill response; organizes and staffs Regional Response Team meetings; assists the Federal Emergency Management Agency (FEMA) at major disasters; participates in response and safety training of state and local staff; and maintains response equipment and facilities. Resources support the development of Phase II of the Oil Spill Regulations (initiated as a result of the Ashland Oil Spill). Phase II expands the regulations to include site specific contingency plans and prevention of spills at larger facilities that may affect drinking water or sensitive ecosystems. The EPA expects this amendment to be published as a proposed rule in the Federal Register by summer of 1990.

1989 Accomplishments

In 1989, the Agency obligated $3,912,300 supported by 39.8 total workyears for this program, of which $2,019,200 was from the Salaries and Expenses appropriation and $1,893,100 was from the Abatement, Control and Compliance appropriation.

The program received and screened a total of 7,133 notifications of oil spill releases, conducted 513 SPCC inspections, performed on-scene monitoring of 542 oil spills, conducted 207 oil spill responses, and investigated 66 oil releases. Based on the recommendations of the Oil Spill Prevention, Control and Countermeasures Program Task Force (Task Force), convened in response to concerns raised by the Ashland Oil Spill, EPA has amended the SPCC regulations. The amendments to the SPCC regulations make most discretionary aspects of the regulations mandatory.

SPILL RESTORATION PROGRAM

1991 Program Request

The Agency requests no resources for this program. This represents a decrease of $871,800 in the Salaries and Expenses appropriation. The decrease reflects the completion of activities undertaken with funds appropriated in 1990.

1990 Program

The Agency is allocating a total of $871,800 for this program, all of which is from the Salaries and Expenses appropriation.

The Agency, through the Alaska Restoration Task Force Office (ARTFO), supports activities to develop and implement a restoration plan of the Trustee Agencies -- the Departments of Agriculture, Commerce, and the Interior -- for the areas impacted by EXXON VALDEZ oil spill. The Agency provides technical assistance and expertise to designated task forces, and to the Trustee Agencies in the development of a restoration plan, a review of damage assessment data, and identification of data needs. The Regional office is guiding and participating in activities of the Regional Response Team and in restoration activities. The office supports the State of Alaska in assessing contamination and clean-up activities and assists the Trustee Agencies in sampling and monitoring programs. The Agency also participates in workshops, reviews workplans, and reviews environmental and water quality data. Agency support is being provided for the development of monitoring protocols for toxic pollutant investigations.

1989 Accomplishments

In 1989, no funds were obligated for this program.

STANDARDS AND REGULATIONS

1991 Program Request

The Agency requests a total of $9,774,000 supported by 98.0 total workyears for this program, of which $5,432,100 will be for the Salaries and Expenses appropriation and $4,341,900 will be for the Abatement, Control and Compliance appropriation. This reflects increases of $827,600 in Salaries and Expenses, 6.3 workyears and $209,100 in Abatement, Control and Compliance. The increases will support special criteria and standards work for critical aquatic resource protection, especially coastal and marine waters.

The program will address pressing needs for guidance and technical support for state standards to protect critical aquatic resources. To select pollutants for numeric salt and fresh water criteria, EPA will use a ranking methodology to identify pollutants judged to pose unusually high risk due to toxic effects and exposure to humans and aquatic life. EPA will then (1) issue 5 proposed and 5 final fresh water quality criteria documents, 6 proposed salt water quality criteria documents, 15 proposed and 15 final water quality advisories, and begin developing additional fresh and salt water criteria; (2) complete and verify methodology to develop sediment criteria for organic pollutants; (3) develop guidance to strengthen numeric criteria for toxic pollutants; (4) promulgate revisions to the Water Quality Standards (WQS) regulations; and (5) provide workshops, training and technical assistance to help states adopt numeric criteria for toxic pollutants. To assist states in addressing the growing problems in coastal/marine waters, EPA will accelerate development of salt water criteria for toxic pollutants in the water column and in sediments; develop guidance on using salt water values, sediment criteria and biological criteria to adopt WQS for coastal waters; and provide technical assistance and five additional workshops to strengthen WQS for coastal waters.

Regions will assist states in adopting new provisions in WQS to assess and protect critical fresh and alst waters such as esturies, coastal areas or areas impacted by contaminated sediments. Regions will continue to review and approve state and Indian WQS, resolve issues and provide needed litigation support. Regions will complete promulgation of WQS for states failing to meet statutory requirements to adopt numeric criteria for priority toxic pollutants. To help target activities to geographic areas based on ecological and human health risk, Regions will conduct training and work with states to use data collected in conjunction with Sections 305(b), 304(1) and 303(d) analyses. Regions will assist states in adopting salt and fresh water criteria for newly-identified toxic pollutants, in addressing bioaccumulation of toxic pollutants in fish flesh and in applying antidegradation implementation methods.

In targeted coastal and marine areas, Regions will assist states in adopting salt water toxic criteria, using biological criteria to evaluate and protect biological integrity and applying antidegradation policies and implementation procedures. In cooperation with states and Indian tribes, Regions will determine where site-specific criteria are warranted and integrate the site-specific analyses into review and revision of state WQS (particularly where water quality-based permits or toxic pollutants are impacting critical aquatic resources). Regions will provide management oversight to existing Clean Lakes projects and prepare information for the Report to Congress on program accomplishments.

EPA will promulgate final first-round criteria and regulations for disposal and use of sewage sludge based on the National Sewage Sludge Survey; revise risk assessment and risk management models based on the Survey; resolve cross-media issues; and complete the rulemaking package and four companion technical support documents. EPA will also conduct workshops and provide technical assistance to states and initiate data collection and analysis on additional pollutants, disposal practices and exposure pathways for second-round regulations.

1990 Program

In 1990, the Agency is allocating a total of $8,737,300 supported by 91.7 total workyears for this program, of which $4,604,500 is from the Salaries and Expenses appropriation and $4,132,800 is from the Abatement, Control and Compliance appropriation.

The program continues to emphasize state adoption of numeric criteria for toxic pollutants; initiate promulgation actions for states not complying with Section 303(c)(2)(B) of the Clean Water Act (CWA); and develop methods to implement state antidegradation policies. Priority objectives for the 1991-1993 WQS triennium are being established and amendments to incorporate changes in the 1987 CWA amendments are being proposed. The program is promulgating rules for qualified Indian tribes and resolving disputes as well as overseeing expansion of the WQS program to qualified Indian tribes. Approximately 7 final water quality criteria documents, 6 proposed criteria documents and nearly 15 water quality advisories are being issued. To ensure adoption of biological and sediment criteria and wetland WQS by the states, EPA is developing criteria and guidance for the 1991-1993 triennium. Outreach programs are providing information to the states on policies and requirements, interpretation and use of water quality criteria and advisories and use of sediment and biological criteria.

EPA is conducting additional sewage sludge modeling activities, evaluating proposed numerical criteria and completing its response to public comments on the proposed technical regulations for use and disposal of sewage sludge. If appropriate, EPA will publish new information for public comment on the proposed technical regulation, and may prepare additional regulatory options.

1989 Accomplishments

In 1989, the Agency obligated a total of $7,716,900 supported by 83.6 total workyears for this program, of which $4,400,400 was from the Salaries and Expenses appropriation and $3,316,500 was from the Abatement, Control and Compliance appropriation.

The Agency published one proposed toxic water quality criterion, one salt water aquatic criteria document and a final methodology for deriving sediment criteria values for nonpolar organic contaminants. Headquarters and Regions reviewed state WQS relating to use attainability, site-specific criteria development, antidegradation and adoption of criteria for toxic pollutants.

Regions worked with states to examine the adequacy of narrative criteria for toxics and control methods recommended for toxic discharges and to resolve complex use/criteria revision and modification issues and differences in state WQS. Antidegradation policies were reviewed for consistency with regulatory requirements and states were assisted in developing implementation methods.

EPA examined priority water segments requiring site-specific criteria and assisted states in collecting data and selecting appropriate methods and procedures for use attainability analyses. Regions helped states conduct use attainability analyses and provided guidance, data and examples from other states. Regions also provided assistance to states to develop assessments of lake water quality included in Section 305(b) Reports and managed existing grants to states for lake assessments and restorations.

EPA proposed regulations identifying toxic pollutants in sludge, appropriate management practices and numeric limits for 29 pollutants. EPA also prepared five technical support documents addressing common sludge use and disposal practices, and conducted four public hearings and three workshops to assist Regions and states interpret and apply the sludge technical regulations. EPA evaluated 634 public comments (5,500 pages) on the sludge regulations, began analyzing data from the National Sewage Sludge Survey and continued efforts to generate incinerator emission data.

NONPOINT SOURCE MANAGEMENT GRANTS

1991 Program Request

The Agency requests a total of $14,250,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $22,683,100 from 1990, which reflects a reduced need for funding after initial start-up of implementation efforts.

The Clean Water Act (CWA) amendments of 1987 required states to prepare and submit nonpoint source (NPS) management programs that describe how they plan to prevent and control NPS pollution and improve water quality. Under Section 319 of the CWA, EPA is authorized to make grants to states that demonstrate the willingness and ability to effectively implement Best Management Practices (BMPs) that control particularly difficult or serious NPS pollution problems and/or use innovative methods or practices to prevent or control NPS pollution. Major sources of NPS pollution to be addressed include (1) agricultural practices that result in surface water contamination by soils, fertilizers, pesticides, and animal wastes; (2) resource extraction (mining/oil and gas) causing serious water quality impacts; and (3) urban NPS pollution (contaminated urban runoff) that results in substantial loadings of toxic and conventional pollutants.

Projects selected for funding will focus on measures (regulatory and nonregulatory) to abate and prevent NPS pollution in targeted watersheds, particularly critical aquatic resources and habitats such as estuaries, near coastal waters and wetlands. Each project selected for funding must include provisions for (1) on-site assistance to ensure effective implementation of technical solutions, education and outreach to raise public awareness and mobilize public participation, and technology and information transfer to upstream communities whose cooperation is essential to the long-term success of the specific project; (2) innovative prevention and control techniques that may have wider applicability; (3) state and local regulatory and enforcement mechanisms to complement traditional voluntary efforts, where appropriate; (4) environmental/biological indicators to measure changes in water quality and habitat; (5) techniques to avoid ground-water contamination as a result of reducing and/or eliminating NPS pollution to surface waters; and (6) sound institutional and financial arrangements that will lead to long-term water quality improvements through self-sustaining state and/or local NPS prevention and control programs. All activities selected for funding must achieve discrete, measurable results that will reduce risk to human health and the aquatic environment and must advance states toward effective implementation of comprehensive NPS management programs.

Grants under Section 319 will also be used for activities to build state institutional capabilities to protect ground-water resources from NPS pollution. Such activities include (1) ground-water resource assessments in areas where NPS pollution is a major concern; (2) development of best management practices to prevent ground-water contamination; (3) development of technical assistance documents and training efforts; (4) establishment of state and local regulatory and nonregulatory capabilities; (5) establishment of institutional responsibilities and coordination mechanisms; and (6) development of ground-water monitoring capability, including data management.

1990 Program

In 1990, the Agency is allocating a total of $36,933,100 for this program, all of which is from the Abatement, Control and Compliance appropriation.

Nonpoint source management grants are available to states and qualified Indian tribes to implement approved elements of their Section 319 NPS management programs. EPA is developing state-by-state planning targets for funding based on interim criteria that reflect nonpoint source needs; preparing guidance on the award and management of grants in accordance EPA's December 1987 NPS Guidance; and awarding grants to fund NPS activities that result in demonstrated progress in achieving Congress' goal of preventing and abating NPS pollution. Priorities for funding include (1) the effectiveness of a state's performance to date; (2) programs balanced to provide for both improvement and protection of water quality in specific watersheds and institutionalization of long-term, statewide NPS management programs; (3) particular NPS activities of highest priority to the Agency (including those articulated in the 1987 NPS Guidance); and (4) commitment to conduct appropriate before-and-after water quality monitoring and evaluation activities to enable EPA to report to Congress on progress in reducing NPS pollution and improving water quality. Each grant will contain a ground-water element to further state assessment of ground-water resources and to establish a basis for identifying priority protection needs prior to undertaking any site-specific measures. If a state already has a good basis for determining its ground-water priorities, then the state should implement efforts to address these priorities.

1989 Accomplishments

No funds were obligated for this program in 1989.

NONPOINT SOURCE IMPLEMENTATION

1991 Program Request

The Agency requests a total of $750,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $1,194,100 from 1990, which is consistent with reduced grant funding after initial start-up.

Based on the long-term funding policy developed in 1990, Headquarters will continue to oversee Regional efforts to award and manage funds to states under Section 319. EPA will continue to negotiate sound state work plans for projects consistent with the complex legal and procedural requirements associated with grants under Section 319, including program tracking and accounting requirements. EPA will also continue activities related to the approval of complete NPS management programs in each state and to oversee state implementation, which may include on-site reviews.

1990 Program

In 1990, the Agency is allocating $1,944,100 for this program, all of which is from the Abatement, Control and Compliance appropriation.

Since 1990 is the initial year of Section 319(h) funding, start-up activities represent a major program focus. Start-up activities include developing state-by-state planning targets for funding based on interim criteria consistent with direction provided by Congress, preparing guidance on the award and management of grants consistent with EPA's 1987 guidance and awarding grants for NPS activities based on funding priorities. A NPS funding policy for use in 1991 and beyond is also being developed.

Further, EPA is developing and implementing reporting and oversight procedures designed to ensure the integrity of the grants process and assure positive environmental results from the projects selected for funding. Activities include Headquarters review of selected management programs, grant work programs and watershed plans; participation with Regions in selected reviews of state programs; and on-site review of Regional NPS programs. Regions will conduct on-site inspections of selected watershed projects to assure satisfactory progress.

1989 Accomplishments

The Agency did not obligate funds for this program in 1989.

WATER QUALITY
Water Quality Monitoring & Analysis

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Coastal Environment Management					
Salaries & Expenses	$4,135.8	$6,315.9	$5,813.4	$7,627.6	$1,814.2
Abatement Control and Compliance	$11,511.3	$15,461.8	$15,239.5	$27,248.9	$12,009.4
TOTAL	$15,647.1	$21,777.7	$21,052.9	$34,876.5	$13,823.6
Water Quality Monitoring & Analysis					
Salaries & Expenses	$8,231.5	$9,091.7	$8,176.0	$8,670.9	$494.9
Abatement Control and Compliance	$6,822.7	$6,603.5	$6,514.4	$6,110.1	$404.3-
TOTAL	$15,054.2	$15,695.2	$14,690.4	$14,781.0	$90.6
TOTAL:					
Salaries & Expenses	$12,367.3	$15,407.6	$13,989.4	$16,298.5	$2,309.1
Abatement Control and Compliance	$18,334.0	$22,065.3	$21,753.9	$33,359.0	$11,605.1
Water Quality Monitoring & Analysis TOTAL	$30,701.3	$37,472.9	$35,743.3	$49,657.5	$13,914.2
PERMANENT WORKYEARS					
Coastal Environment Management	79.6	124.0	117.9	146.5	28.6
Water Quality Monitoring & Analysis	156.4	162.5	156.6	156.7	.1
TOTAL PERMANENT WORKYEARS	236.0	286.5	274.5	303.2	28.7
TOTAL WORKYEARS					
Coastal Environment Management	84.3	124.0	123.9	146.5	22.6
Water Quality Monitoring & Analysis	164.6	162.5	162.1	156.7	-5.4
TOTAL WORKYEARS	248.9	286.5	286.0	303.2	17.2

WATER QUALITY

Water Quality Monitoring and Analysis

Budget Request

The Agency requests a total of $49,657,500 supported by 303.2 total workyears for 1991, an increase of $13,914,200 and an increase of 17.2 total workyears from 1990. Of the request, $16,298,500 will be for the Salaries and Expenses appropriation and $33,359,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,309,100 in the Salaries and Expenses appropriation and an increase of $11,605,300 in the Abatement, Control and Compliance appropriation.

COASTAL ENVIRONMENT MANAGEMENT

1991 Program Request

The Agency requests a total of $34,876,500 and 146.5 total workyears for this program, of which $7,627,600 will be for the Salaries and Expenses appropriation and $27,248,900 will be for the Abatement, Control and Compliance appropriation. This represents increases of $1,814,200 in Salaries and Expenses, $12,009,400 in Abatement, Control and Compliance, and 22.6 in total workyears. The increases reflect increased Headquarters and Regional activities in the National Estuary Program (NEP) projects as 9 of the 16 projects enter the complex environmental characterization and plan development phases; implementation of near coastal waters (NCW) Regional coastal strategies to address major coastal pollution problems; and implementation of the Clean Water Act (CWA) Section 403(c) program strategy for bringing ocean discharge permittees into compliance with 403(c) criteria.

In 1991, Headquarters and the coastal Regions will support 16 estuary projects in the NEP, under CWA Section 320. The Management Conferences for the Buzzards Bay, Narragansett Bay, and Puget Sound projects will complete Comprehensive Conservation and Management Plans (CCMP) and begin implementation by state and local governments. The Long Island Sound, Albemarle-Pamlico Sounds, and San Francisco Bay projects will be in the third phase, CCMP development. The New York-New Jersey Harbor, Delaware Bay, Delaware Inland Bays, Sarasota Bay, Galveston Bay and Santa Monica Bay projects will be in the second phase, problem definition and resource characterization. Projects selected in 1990 will enter the second phase. The NEP action projects to demonstrate innovative clean-up strategies will be completed, evaluated, and shared with other Regions and states.

Headquarters and the Regions will seek to protect all coastal waters and the Great Lakes, through the implementation of Regional coastal strategies developed with the states. These strategies will target geographic areas and/or specific problems based on risk. Emphasis will be on the enhancement of base water programs to address problems and prevent pollution in NCWs. NCW Regional strategies for the Great Lakes will focus on implementation activities related to the Remedial Action Plans and Lakewide Management Plans. Another essential component of the Regional NCW strategies will be demonstration projects supported by Headquarters to test control and pollution prevention effectiveness. Grants will be provided to state and local governments for selected action demonstrations identified as national priorities in NCW strategies or through the NEP projects.

To respond to needs identified by the Regions and states through the Regional NCW strategies, Headquarters will continue to develop tools and conduct training. A technology transfer initiative will involve base water programs for permitting and enforcement, water quality criteria, and standards. In this initiative, technical assistance will be provided on request to Regional and state staffs to integrate point source, nonpoint source, and water quality planning expertise to address identified NCW problems. Regions IV and VI will oversee the Gulf of Mexico Program and assist in development of a Louisiana coastal restoration study.

In the Section 301(h) programs, Headquarters will continue to support Regions I, II, IX, and X in the preparation of secondary equivalency determinations and permit reissuance activities. Under the Section 403(c) program, Headquarters will increase support to the coastal Regions for the continued implementation of the strategy in the 1989 report to Congress. The goal of the strategy is to bring National Pollutant Discharge Elimination System (NPDES) permittees into compliance with Section 403(c) criteria, and the program includes conducting risk assessments for direct ocean dischargers.

1990 Program

In 1990, the Agency is allocating a total of $21,052,900 supported by 123.9 total workyears for this program, of which $5,813,400 is from the Salaries and Expenses appropriation and $15,239,500 is from the Abatement, Control and Compliance appropriation. The NEP is also supported by $4,755,000 provided in the last year of the CWA Section 205(1) set-aside from the Construction Grants appropriation.

Through the NEP, Headquarters and the coastal Regions will provide support and oversight to twelve estuary projects, including the six initial projects: San Francisco Bay, Albemarle-Pamlico Sounds, Narragansett Bay, Long Island Sound, Puget Sound, and Buzzards Bay. The Buzzards Bay project completes its CCMP by mid-1990 and begins the implementation phase of the program, while the other five projects complete the intensive environmental characterization and begin CCMP development. The six projects selected in 1988 -- New York-New Jersey Harbor, Delaware Bay, Delaware Inland Bays, Sarasota Bay, Galveston Bay, and Santa Monica Bay -- begin the intensive characterization phase. With priority consideration given to project sites referenced in a 1987 CWA amendment, new projects, selected by the Agency on the basis of national significance, are being designated in 1990 to expand geographic coverage, to develop further project expertise, and to further test remedial approaches developed in earlier estuary projects.

For NCW initiatives, the Regions continue working with the states to assess environmental risks in NCWs, select and define priority problems, identify needed enhancements to ongoing programs, and identify and implement innovative abatement and control programs. The Headquarters/Regions' national network to exchange information on NCW problems and management tools links the Chesapeake Bay and Great Lakes programs with the NEP and NCW demonstration projects. Emphasis is on providing technical assistance and training to local project managers.

Regions IV and VI continue support for the Gulf of Mexico Program, including further development of the program's "Framework for Action" and additional monitoring and data collection to assess environmental health and to establish a base for policy/regulatory options.

The Section 301(h) programs of Regions I, II, IX, and X focus on the evaluation of monitoring programs and permit reissuance, following completion of final waiver determinations for the remaining first round applications. The programs include preliminary work for reissuance of permits that expire in 1991 and secondary treatment equivalency determinations, as required. Headquarters will support a study by the National Academy of Science on opportunities to improve wastewater management by urban coastal areas. The coastal Regions' Section 403(c) programs continue efforts to bring NPDES permittees into compliance with Section 403(c) criteria, consistent with the recommendations of the 1989 report to Congress.

1989 Accomplishments

In 1989, the Agency obligated a total of $15,647,100 supported by 84.3 total workyears for this program, of which $4,135,800 was from the Salaries and Expenses appropriation and $11,511,300 was from the Abatement, Control and Compliance appropriation. The NEP was also supported by $4,705,000 provided through the Section 205(1) set-aside from the Construction Grants appropriation.

Through the NEP, Headquarters and the coastal Regions supported twelve estuary projects in 1989. Three of the initial projects were developing their CCMP, and the remaining three of the initial projects were continuing their environmental resources characterization work. The six projects added in 1988 began planning initiative activities, following the state governors' decisions to convene the project Management Conferences. There was an increased emphasis on conducting pollutant load assessments and completion of assessments of status and trends. Priority demonstration plans to implement targeted clean-up strategies in selected estuary projects received assistance using Section 205(1) set-aside resources.

In addition to ongoing estuarine activities, the Regions continued the assessment of NCWs to determine environmental status and water quality trends, and to identify NCWs needing management attention. In a parallel effort, three ongoing pilot projects and three new pilot projects were conducted in coastal and marine areas to demonstrate innovative solutions for identified major environmental problems. Region IV and VI also continued to support development of the "Framework for Action" for the Gulf of Mexico Program to begin resource characterization and assessment activities.

In the Section 301(h) marine discharge programs, Regions I, II, IX, and X completed most first round application waiver decisions by the end of 1989, and waiver recipients began to implement required water quality monitoring programs. The Section 403(c) program's report to Congress by Headquarters included a targeted strategy for bringing NPDES permittees into compliance with ocean discharge criteria. Headquarters also developed a Permit Writer's Guide for use by the coastal Regions and at the local level in conducting Section 403(c) evaluations and addressing point source discharges to NCW.

WATER QUALITY MONITORING AND ANALYSIS

1991 Program Request

The Agency requests a total of $14,781,000 supported by 156.7 total workyears for this program, of which $8,670,900 will be for the Salaries and Expenses appropriation and $6,110,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $494,900 for Salaries and Expenses, a decrease of $404,300 for Abatement, Control and Compliance and a decrease of 5.4 workyears. The increase in Salaries and Expenses supports efforts to enhance EPA and state water quality data systems. The decreases reflect completion of initial state 304(l) listing requirements.

Based on previous national and state water quality studies and reports (such as the Section 304(l) and Section 305(b) reports), the program will concentrate on geographic areas where the presence of contaminated sediments, toxics in the water column or bioaccumulative toxics pose the greatest risk to human health and the aquatic environment. EPA will conduct studies and encourage states to evaluate water quality in these areas as well as the sources of pollutants, and develop needed controls to minimize the risks to human health and the aquatic environment. States will be expected to develop total maximum daily loads (TMDLs), wasteload allocations (WLAs) and load allocations (LAs) where water quality-based controls are needed to reduce point and nonpoint source discharges.

Headquarters will develop a final national long-term Monitoring Framework document and related implementation guidance and sponsor a third national monitoring symposium. Headquarters will also sponsor workshops to describe simplified methods that states can use to identify areas where contaminated sediment presents a high-risk, as well as remediation methods states can use at specific sites.

Headquarters will analyze the 1990 state Section 305(b) reports and prepare the national water quality report to Congress. Headquarters will also work closely with Regions and states to develop and implement guidance for preparing the State 1992 Section 305(b) reports.

Headquarters and Regions will continue to strengthen state assessment and monitoring programs and further enhance the Waterbody System by linking it to state Geographic Information Systems and to national water quality data systems operated by other Federal agencies. The Regions will review state workplans and specific water quality assessments and will assist in environmental data management. Audits of state assessment programs will be conducted by the Regions to identify areas for increased efficiencies and other needed improvements.

1990 Program

In 1990, the Agency is allocating a total of $14,690,400 supported by 162.1 total workyears for this program, of which $8,176,000 is from the Salaries and Expenses appropriation and $6,514,400 is from the Abatement, Control and Compliance appropriation.

The program continues a high priority effort to assure effective implementation of Section 304(l) of the Clean Water Act, providing assistance and oversight in addressing deficiencies in state submissions. Where states fail to act, the Agency is developing and promulgating lists of waters impaired by toxics and developing WLA's for disapproved individual control strategies (ICSs).

The Bioaccumulation Study is being finalized, which will be used along with other information to prepare a surface water risk assessment for pulp and paper companies. The program is developing several guidance documents on how to assess and remediate sediment contamination problems where toxic pollutants are suspected of causing adverse impacts on aquatic life and bioaccumulation problems.

The surface water monitoring program is encouraging states to adopt more cost-effective approaches, such as rapid biological assessments and use of citizen volunteer programs, to enhance and augment state monitoring programs. A series of national and Regional symposia and workshops is being conducted to address nonpoint source pollution monitoring and assessment, estuarine monitoring, sediment contamination and bioaccumulation of pollutants in fish tissue. EPA is also assisting states to monitor toxic pollutants and assess toxicity in the aquatic environment, through workshops and direct involvement in specific projects. States are completing their 1990 Section 305(b) reports. The Agency continues to strengthen state trend assessment and laboratory analysis capabilities and improve water quality data management to enable integration with other data bases. A detailed river network is also being prepared for use in STORET and other data bases.

1989 Accomplishments

In 1989, the Agency obligated a total of $15,054,200 supported by 164.6 total workyears for this program, of which $8,231,500 was from the Salaries and Expenses appropriation and $6,822,700 was from the Abatement, Control and Compliance appropriation.

Headquarters issued proposed and final regulations that governed the Section 304(l) listing of waters impaired by toxic pollutants. To facilitate the development of the state lists and the development of ICSs, Headquarters performed national assessments of toxic problems. Three reports to Congress and a study required by Sections 308(g), 516, 524 and 525 of the Clean Water Act were completed.

Regions reviewed and approved or disapproved state Section 304(l) lists and began the public participation process where needed. Regions continued to assist states in conducting WLAs and other analyses to develop ICSs for controlling toxics dischargers. Regions continued to participate in the National Bioaccumulation Study and, where bioaccumulation problems were discovered, assisted states in developing effective control strategies. A report on the results of the National Bioaccumulation Study was drafted. Two guidance documents were prepared on sediment contamination problems: one outlining methods for assessing contamination and the other describing current EPA statutory authorities and programs for dealing with these problems.

The Regions were responsible for approving or disapproving TMDLs and WLAs developed by states under Section 303(d) and for producing TMDLs/WLAs if states failed to do so.

WATER QUALITY
Municipal Source Control

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
				(DOLLARS IN THOUSANDS)		
PROGRAM						
Municipal Waste Treatment Facility Construction						
Salaries & Expenses		$20,729.4	$21,029.4	$21,032.3	$20,555.0	$477.3-
Abatement Control and Compliance		$24,338.1	$20,626.0	$20,336.9	$20,442.6	$105.7
	TOTAL	$45,067.5	$41,655.4	$41,369.2	$40,997.6	$371.6-
Waste Treatment Operations & Maintenance						
Salaries & Expenses		$1,170.3	$1,521.0	$1,403.2	$1,629.9	$226.7
	TOTAL	$1,170.3	$1,521.0	$1,403.2	$1,629.9	$226.7
TOTAL:						
Salaries & Expenses		$21,899.7	$22,550.4	$22,435.5	$22,184.9	$250.6-
Abatement Control and Compliance		$24,338.1	$20,626.0	$20,336.9	$20,442.6	$105.7
Municipal Source Control	TOTAL	$46,237.8	$43,176.4	$42,772.4	$42,627.5	$144.9-
PERMANENT WORKYEARS						
Municipal Waste Treatment Facility Construction		391.8	430.0	401.3	387.6	-13.7
Waste Treatment Operations & Maintenance		25.5	31.5	30.6	31.5	.9
TOTAL PERMANENT WORKYEARS		417.3	461.5	431.9	419.1	-12.8
TOTAL WORKYEARS						
Municipal Waste Treatment Facility Construction		422.5	430.0	426.5	387.6	-38.9
Waste Treatment Operations & Maintenance		26.4	31.5	31.5	31.5	
TOTAL WORKYEARS		448.9	461.5	458.0	419.1	-38.9

WATER QUALITY

Municipal Source Control

Budget Request

The Agency requests a total of $42,627,500 supported by 419.1 total workyears for 1991, a decrease of $144,900 and 38.9 total workyears from 1990. Of the request, $22,184,900 will be for the Salaries and Expenses appropriation and $20,442,600 will be for the Abatement, Control and Compliance appropriation, a decrease of $250,600 and an increase of $105,700 respectively.

MUNICIPAL WASTE TREATMENT FACILITY CONSTRUCTION

1991 Program Request

The Agency requests a total of $40,997,600 supported by 387.6 total workyears for this program, of which $20,555,000 will be for the Salaries and Expenses appropriation and $20,442,600 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of 38.9 workyears and $477,300 and an increase of $105,700 respectively. The decrease in workyears reflects reduced workload for the award of construction grants and completed initial State Revolving Loan Fund (SRF) awards for most of the states. The increase in Abatement, Control and Compliance reflects support for major municipal pollution prevention and water conservation initiatives.

In 1991, EPA will continue, in cooperation with states, to manage the implementation and oversight of the SRF program. With 50 SRF programs operating, a high level of effort will be required to provide extensive first round reviews of annual reports, as well as review and approval of more complex SRF financing proposals. The Agency will implement State Funding Study recommendations by promoting state use of alternative financing mechanisms and establishing a national clearinghouse to collect and disseminate information on state and municipal financing issues.

Although funding for the construction grants program ended in 1990, the traditional program management workload of state oversight responsibilities will continue. Regions will be managing a workload of approximately 4,800 active grant projects. Maximum emphasis will be placed on the completion and closeout of grant projects and resolution of audit problems. The funds requested for the Corps of Engineers Interagency Agreement will purchase 250 workyears of effort to provide construction management assistance to EPA and the states. States will continue to manage delegated programs to completion although the adequacy of Section 205(g) fund balances could begin to be a problem in some states. Projects funded under the first and second cycles of the Indian set-aside for projects on Indian reservations and in Alaska Native Villages will be in the active stages of design and construction, requiring significant coordination and negotiation with the Indian Health Service and tribes.

In 1991, the Agency will be implementing initiatives in municipal water pollution prevention, water conservation and technology transfer to assure that the national investment in wastewater treatment infrastructure is protected.

Water pollution prevention strategies and proactive state programs will emphasize preventive measures and support systems encouraging municipalities to maintain compliance and prevent future non-compliance. The Agency will provide $800,000 to support effective on-site operations, maintenance and compliance assistance to operators of small publicly owned treatment works (POTWs). Activities associated with the management of the operator training program are described in the operations and maintenance program element.

The cooperative effort of wastewater treatment and drinking water programs providing financing and technology assistance to small communities will continue. The Agency will be promoting and developing demonstration projects with public/private partnerships to assist municipalities in solving POTW problems. Regions will continue to conduct user charge system reviews to assess the adequacy of user fees to meet costs and ensure permit compliance. In 1991, the Agency will focus on establishing a national ethic of efficient water use, promote overall reduction of the nation's water use on a per capita basis and encourage a significant nationwide increase in the reclamation and reuse of wastewater for various applications.

Headquarters will continue to provide technical guidance and program assistance on sewage sludge management, pretreatment requirements and groundwater contamination from leaky sewers, as well as new technologies such as wetlands treatment systems.

1990 Program

In 1990, the Agency is allocating a total of $41,369,200 supported by 426.5 total workyears for this program, of which $21,032,300 is from the Salaries and Expenses appropriation and $20,336,900 is from the Abatement, Control and Compliance appropriation.

EPA is managing dual wastewater treatment grant programs with emphasis on the prompt completion of active construction grants projects, resolution of audit problems and implementation oversight of SRF programs. The highest program priority in the Regions is to negotiate and award initial SRF grants, as well as conduct first annual program reviews. Regions also maintain essential emphasis on traditional construction grants management activities and are addressing a workload of approximately 5,500 grant projects. As a result of the first funding cycle, funding for 18 Indian tribes and 8 Alaska Native Villages is provided. The $15,500,000 allocated for the Corps of Engineers Interagency Agreement is supporting 250 workyears of effort to provide construction management assistance to EPA and the states. EPA is developing a strategy to deal with the completion of the program including problems introduced as the states deplete 205(g) program grant funds. The strategy will be based on the ongoing partnership among EPA (including the Inspector General and Regions), the Corps of Engineers and the state agencies, and will identify the necessary level and mix of program resources to handle the completion workload.

In 1990, EPA is taking a new direction to prevent pollution and assure protection of the nation's multi-billion dollar infrastructure of major public health and water quality improvements. The Agency is promoting state programs related to municipal water pollution prevention, water conservation and technology transfer. $1,800,000 is targeted for operator training grants to implement state operator training programs to assist small communities. Regions are providing increased information and assistance to help municipalities address alternative financing methods for wastewater treatment needs. The wastewater treatment and drinking water programs are engaged in a cooperative effort to provide information and assistance on financing and technology to hard-pressed small communities. Headquarters is coordinating research, technology transfer and outreach activities with other agencies and national organizations, including the Small Flows Clearinghouse.

1989 Accomplishments

In 1989, the Agency obligated a total of $45,067,500 supported by 422.5 total workyears for this program, of which $20,729,400 was from the Salaries and Expenses appropriation and $24,338,100 was from the Abatement, Control and Compliance appropriation.

1989 was a critical year for the program with a maximum SRF implementation effort and significant continuing responsibility for the traditional management and oversight of over 6,000 ongoing construction grants projects. Title VI authorized states to request 1989 funds for SRFs and 43 states submitted capitalization grant applications. Thirty-five new SRF programs came on line in 1989. With contractor support, Regions and states received SRF program training, including a series of Letter of Credit seminars to inform the states and financial community how the payment process works.

EPA continued to monitor state delegation status and performed the remaining nondelegated project management responsibilities. The 50 delegated states and Puerto Rico have submitted phase out strategies which describe the work remaining to manage the construction grants program to completion and the human and financial resources required to perform the work. In addition, implementation of new construction grants provisions, including grants to Indian tribes, continued. EPA initiated an Interagency Agreement with the Indian Health Service for assistance in implementing the Indian set-aside grants program. Final Indian program guidance was issued and the Indian Needs Survey Report to Congress was also issued. The $15,300,000 obligated for the Corps of Engineers Interagency Agreement purchased 275 workyears to provide construction management assistance to EPA and the states. The 1988 Needs Survey was completed and planning for the 1990 Needs Survey was initiated.

WASTE TREATMENT OPERATIONS AND MAINTENANCE

1991 Program Request

The Agency requests a total of $1,629,900 supported by 31.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $226,700 in the Salaries and Expenses appropriation and no change in workyears. The increase reflects increased personnel and support costs.

In 1991, a national pollution prevention initiative to prevent noncompliance through technical assistance and training will be underway in the operations and maintenance (O&M) program. The $800,000 in grant funds noted in the municipal waster treatment facility construction program above will enable state and EPA Regional staff to provide on-site compliance assistance and operator training at about 270 minor POTWs. Continued operator training grants assistance to states with comprehensive municipal compliance programs is resulting in significant compliance improvements. As a result of improvements, EPA will continue to provide technical and financial management assistance, and information and guidance will continue to be disseminated to promote more enhanced O&M and operator training activities in states and small communities. Headquarters will issue 104(g) annual guidance and continue to oversee state and Regional operator training programs to address O&M and manpower problems in small communities.

The mission of state 109(b) training centers will be expanded to include comprehensive environmental training. In an Interagency Agreement with the Indian Health Service, EPA is developing a model operator training program in Region VI. The model will be extended to other Regions and coordinated with operator training initiatives for drinking water, furthering our collaborative efforts with small communities.

In 1991, awards for exemplary performance in operations and maintenance, beneficial uses of sludge and pretreatment will continue to be made through the enhanced National and Regional Wastewater Excellence Awards program. Management of Quality Assurance/Quality Control (QA/QC) programs will continue and recommendations for improvements in project performance certification will also continue.

1990 Program

The Agency is allocating a total of $1,403,200 supported by 31.5 total workyears for this program, all of which is from for the Salaries and Expenses appropriation.

Stable staffing, together with the resources allocated to continue operator training grants under the Municipal Waste Treatment Facilities Construction program, will contribute to the development of effective state O&M and operator training programs and support improved minor municipal facilities compliance.

With the $1,800,000 in grant funds noted in the municipal waste treatment facility construction program above, state and EPA Regional staff are continuing to provide on-site compliance assistance and operator training at about 700 minor POTWs. Regional/state operations management evaluations and operator training programs are a key component to the municipal water pollution prevention initiative aimed at preventing noncompliance. In addition to managing operator training grants, Regions are working directly with selected minor facilities that have problems and overseeing project performance certification reviews. Annual guidance on the 104(g) program is being issued and financial management instructor guidance is being implemented. EPA is promoting improved local user charge and financial management systems and identification of O&M compliance problems through effective diagnostic evaluation and laboratory QA/QC programs.

EPA is continuing to recognize superior facilities through enhancements to its National and Regional Wastewater Excellence Awards programs. In addition, the Agency is providing guidance, information and oversight to assist the states and communities to strengthen local O&M programs for improved sludge, toxics, and innovative, alternative and conventional technologies management.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,170,300 supported by 26.4 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

Information and guidance were issued to promote more cost-effective O&M activities funded under Sections 104(g), 106 and 205(g). States and EPA Regions obligated $1,800,000 to provide on-site O&M assistance to approximately 700 facilities and returned 363 to compliance. EPA conducted a program to train on-site inspectors to diagnose and assist in resolution of small communities' financial and user charge system problems where these contribute to O&M and permit compliance problems.

EPA continued the National Wastewater Excellence Awards program which was expanded to recognize exemplary pretreatment programs. The Agency made 70 Regional awards and 22 national awards. Staff reviewed project performance certifications and implemented minor POTW QA/QC programs.

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WATER QUALITY
Water Quality Enforcement

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM					
Water Quality Enforcement					
Salaries & Expenses	$18,587.7	$18,755.6	$18,989.3	$21,511.4	$2,522.1
Abatement Control and Compliance	$1,875.7	$2,539.9	$2,507.6	$5,979.6	$3,472.0
TOTAL	$20,463.4	$21,295.5	$21,496.9	$27,491.0	$5,994.1
TOTAL:					
Salaries & Expenses	$18,587.7	$18,755.6	$18,989.3	$21,511.4	$2,522.1
Abatement Control and Compliance	$1,875.7	$2,539.9	$2,507.6	$5,979.6	$3,472.0
Water Quality Enforcement TOTAL	$20,463.4	$21,295.5	$21,496.9	$27,491.0	$5,994.1
PERMANENT WORKYEARS					
Water Quality Enforcement	386.6	394.7	375.5	402.7	27.2
TOTAL PERMANENT WORKYEARS	386.6	394.7	375.5	402.7	27.2
TOTAL WORKYEARS					
Water Quality Enforcement	407.5	394.7	394.4	402.7	8.3
TOTAL WORKYEARS	407.5	394.7	394.4	402.7	8.3

WATER QUALITY

Water Quality Enforcement

Budget Request

The Agency requests a total of $27,491,000 supported by 402.7 total workyears for 1991, an increase of $5,994,100 from 1990. Of the request, $21,511,400 will be for the Salaries and Expenses appropriation and $5,979,600 will be for the Abatement, Control and Compliance appropriation, an increase of $2,522,100 for Salaries and Expenses, an increase of $3,472,000 for Abatement, Control and Compliance, and an increase of 8.3 total workyears.

WATER QUALITY ENFORCEMENT

1991 Program Request

The Agency requests a total of $27,491,000 supported by 402.7 total workyears for this program, of which $21,511,400 will be for the Salaries and Expenses appropriation and $5,979,600 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,522,100 for the Salaries and Expenses appropriation, an increase of $3,472,000 for the Abatement, Control and Compliance appropriation, and an increase of 8.3 total workyears. The increase for Salaries and Expenses reflects funding of personnel costs. The increase for Abatement, Control and Compliance will support data entry into Permit Compliance System (PCS). The increase in workyears will support pretreatment enforcement where EPA is the control authority.

Since all but 207 municipal facilities are expected to have completed construction to meet final effluent limits by the end of 1990, the Agency will emphasize municipal compliance with final effluent limits in 1991. Municipal Enforcement Program (MEP) activities will focus on quick response time to violations, the relative effectiveness of enforcement responses, and a reduction in significant noncompliance rates for publicly owned treatment works (POTWs) on final effluent limits. A municipal pollution prevention program (MPP) will be implemented which emphasizes pollution prevention through careful screening of constructed, complying POTWs to identify those that show potential for violation in the near future. The MPP will include evaluation criteria sufficient to surface potential problems at POTWs in time to allow correction before violations occur.

In 1991, the goal of the pretreatment enforcement program will be improvements in all 1,500 approved programs. Enforcement actions will be taken based on the new definition for significant noncompliance. Pretreatment compliance inspections will be conducted where programs are not audited, annual reports will be reviewed and POTW performance will be tracked through the Pretreatment Permits and Enforcement Tracking System. EPA will continue to rely on states and approved POTWs to ensure the compliance of industrial users with categorical standards and POTW sludge limits. Where there is no approved program, Regions will emphasize the identification of categorical industrial users and monitor compliance where such industries have been identified.

In 1991, the enforcement program will place a high priority on implementation of the Compliance Monitoring and Enforcement Strategy for Toxics Control. The strategy will establish criteria for the review of compliance data related to toxics violations. EPA will also initiate enforcement of permits for combined sewer overflows and enforcement of sludge requirements in permits.

The use of administrative penalty orders will increase, with about 70 percent of these orders issued as Class 1. Nearly all administrative penalty orders will be accompanied by an administrative compliance order to require correction of the violation. All major and industrial permittees will be inspected, and a timely and appropriate enforcement response will be emphasized in all cases of significant noncompliance.

1990 Program

In 1990, the Agency is allocating a total of $21,496,900 supported by 394.4 total workyears for this program, of which $18,989,300 is from the Salaries and Expenses appropriation and $2,507,600 is from the Abatement, Control and Compliance appropriation.

EPA is monitoring the compliance with schedules of those municipals which have not yet completed construction to meet final effluent limits. The Agency is taking enforcement action where necessary to force compliance with schedules. EPA is also initiating a systematic effort to ensure that those municipals on final effluent limits consistently comply with those limits. For municipals which have completed construction, EPA is assessing reasons for noncompliance identifying the causes and establishing corrective action plans.

EPA is monitoring POTWs to assure adequate implementation of their pretreatment programs and initiating enforcement actions against POTWs that fail to implement approved programs. POTWs are receiving guidance on how to determine the economic benefit industrial users derive from noncompliance for purpose of computing penalties, and workshops are being developed and conducted for POTWs on how to take effective enforcement actions.

EPA and approved states are placing a high priority on monitoring and enforcing toxic permit requirements. The Agency is using both chemical and biological methods to monitor compliance of toxics. Enforcement of toxicity requirements is focusing on identification of causes and expeditious elimination of toxicity using the best available technical knowledge in the scientific community.

EPA is developing an inspection program for monitoring compliance with sludge permit requirements. EPA expects to issue a strategy for the monitoring and enforcement of sludge requirements which addresses reporting, the definition of significant noncompliance and specific enforcement issues.

1989 Accomplishments

In 1989, the Agency obligated a total of $20,463,400 supported by 407.5 total workyears for this program, of which $18,587,700 was from the Salaries and Expenses appropriation and $1,875,700 was from the Abatement, Control and Compliance appropriation.

In 1989, the Agency continued to focus on completing unfinished work for National Municipal Policy (NMP). As of October 1, 1989, 76 percent of the NMP universe had completed construction to comply with final effluent limits -- bringing the overall compliance rate for major municipal facilities to 91 percent. Only 12 of the original 1,478 major NMP facilities were not yet in compliance, on an enforceable schedule or referred for judicial enforcement action. Enforceable construction schedules were established for approximately 67 percent of the 1,269 minor municipal facilities needing schedules.

During 1989, EPA conducted a pretreatment enforcement initiative to ensure that approved POTWs control industrial discharges of toxic wastewater into their sewage treatment systems. Sixty one cities were named in judicial actions and administrative orders seeking penalties for violations. (These actions included 30 EPA administrative penalty orders and 18 EPA referrals.) EPA conducted 305 pretreatment compliance inspections and 406 pretreatment inspection at industrial users and referred a total of 34 pretreatment judicial actions to EPA or the Department of Justice. Additionally, EPA issued 286 administrative orders, including 68 administrative penalty orders for violation of pretreatment requirements.

Enforcement of Section 311 oil and hazardous substance spill requirements included 133 referrals to the U.S. Coast Guard for assessment of civil penalties and 41 administrative actions for violations of Spill Prevention Control Countermeasure plan requirements.

WATER QUALITY
Water Quality Permit Issuance

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Permit Issuance						
Salaries & Expenses		$13,462.3	$13,946.4	$14,993.8	$17,579.5	$2,585.7
Abatement Control and Compliance		$8,076.7	$7,198.4	$7,106.5	$8,047.4	$940.9
	TOTAL	$21,539.0	$21,144.8	$22,100.3	$25,626.9	$3,526.6
TOTAL:						
Salaries & Expenses		$13,462.3	$13,946.4	$14,993.8	$17,579.5	$2,585.7
Abatement Control and Compliance		$8,076.7	$7,198.4	$7,106.5	$8,047.4	$940.9
Water Quality Permit Issuance	TOTAL	$21,539.0	$21,144.8	$22,100.3	$25,626.9	$3,526.6
PERMANENT WORKYEARS						
Permit Issuance		292.2	340.3	324.2	342.3	18.1
TOTAL PERMANENT WORKYEARS		292.2	340.3	324.2	342.3	18.1
TOTAL WORKYEARS						
Permit Issuance		309.5	340.3	339.7	342.3	2.6
TOTAL WORKYEARS		309.5	340.3	339.7	342.3	2.6

WATER QUALITY

Water Quality Permit Issuance

Budget Request

The Agency requests a total of $25,626,900 supported by 342.3 total workyears for 1991, an increase of $3,526,600 from 1990. Of the request, $17,579,500 will be for the Salaries and Expenses appropriation and $8,047,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,585,700 in Salaries and Expenses appropriation and an increase of $940,900 in the Abatement, Control and Compliance appropriation and an increase of 2.6 total workyears.

PERMIT ISSUANCE

1991 Program Request

The Agency requests a total of $25,626,900 supported by 342.3 total workyears for this program, of which $17,579,500 will be for the Salaries and Expenses appropriation and $8,047,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,585,700 in Salaries and Expenses, an increase of $940,900 in Abatement, Control and Compliance and an increase of 2.6 in total workyears. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase in Abatement, Control and Compliance will provide support for near coastal waters permitting and pollution prevention efforts.

EPA will emphasize reissuance of expiring major permits incorporating toxic/toxicity limits and modification of permits incorporating limits based on biomonitoring and/or chemical specific testing. EPA will emphasize issuance of Combined Sewer Overflow (CSO) permits and assist states in implementing the CSO strategies developed in 1990. To protect critical habitats, EPA will strengthen its focus on issuing permits to near coastal water (NCW) discharges of pollutants of concern, especially where CSO or stormwater discharges are problems.

EPA will focus on pollution prevention through reissuance of major municipal permits that include requirements for publicly owned treatment works (POTWs) to assess the need to plan for plant upgrades and expansion. Training modules will encourage consideration of innovative approaches to municipal pollution prevention and assist in developing permit requirements for planning plant upgrades. Pollution prevention will also be a significant part of the NCW activities through increased support of the pretreatment program.

EPA will continue to conduct detailed POTW pretreatment program reviews, with appropriate follow-up, to ensure effective implementation. EPA will assist POTWs to develop/modify local limits to control toxics/hazardous pollutants in accordance with revised pretreatment regulations and to ensure compliance with sludge requirements and water quality-based limits in POTW permits.

EPA will continue to assist states in issuing/modifying toxic/toxicity based permits and will work with states to improve their toxic control programs. The Agency will continue to review state (and Indian tribe) National Pollutant Discharge Elimination System (NPDES) programs and program modifications, with emphasis on general permit authority, and encourage state assumption of sludge permitting programs.

EPA will promulgate NPDES regulations to implement programmatic and other Water Quality Act (WQA) related revisions. EPA will complete the Section 519 Pretreatment and second stormwater reports to Congress.

During FY 1991 EPA will work towards implementing a permit fee for water pollution permits issued to dischargers under the NPDES program. During FY 1990 EPA will attempt to develop the necessary regulations to set up the fee system.

1990 Program

In 1990, the Agency is allocating a total of $22,100,300 supported by 339.7 total workyears for this program, of which $14,993,800 is from the Salaries and Expenses appropriation and $7,106,500 is from the Abatement, Control and Compliance appropriation.

EPA continues to emphasize control of hazardous and toxic pollutants from direct dischargers. EPA gives priority to completing the issuance of Individual Control Strategies (ICSs) to major and minor dischargers listed as required by Section 304(l) of the Clean Water Act (CWA), as amended. Remaining permits are being issued to include toxicity-based or water quality-based limits based on human health protection, toxicity reduction evaluations, revised local pretreatment programs, and/or Best Available Technology for organic chemicals.

EPA continues to review NPDES state program and program modification requests. EPA assists states to develop sludge programs and strengthen their toxic control programs in accordance with action plans.

In 1990, EPA is assisting POTWs to develop/modify local limits to control toxics and hazardous pollutants in accordance with revised pretreatment regulations and as required by ICSs and changes in sludge disposal standards. EPA continues to audit POTWs to evaluate application of categorical standards, local limits and issuance of control mechanisms. Guidance and contract assistance is provided to implement revisions to the general Pretreatment Regulations based on Pretreatment Implementation Review Task Force recommendations; to revise/develop local limits to include additional toxic pollutant limits, including organics; to conduct toxicity reduction evaluations and assess toxicity related spills; and to apply organic chemical categorical pretreatment standards. Workshops and seminars are provided on toxicity testing, biomonitoring, and state/POTW pretreatment implementation.

The Agency will promulgate General Pretreatment Regulation revisions reflecting requirements of the Domestic Sewage Study and stormwater application regulations. EPA is completing the first stormwater report to Congress and is beginning work on stormwater application regulations for moratorium sources.

1989 Accomplishments

In 1989, the Agency obligated a total of $21,539,000 supported by 309.5 total workyears for this program, of which $13,462,300 was from the Salaries and Expenses appropriation and $ 8,076,700 was from the Abatement, Control and Compliance appropriation.

Contract resources were used to develop ICSs, evaluate state toxic control assessments, train Regional and state permit writers, develop local limits and water quality-based limits in POTW permits, conduct audits of approved local and NPDES state pretreatment programs, and develop NPDES programs and program modifications, especially sludge programs. Workshops and seminars were held on pretreatment implementation and various phases of NPDES permitting.

EPA issued a total of 419 major permits, of which 250 were industrial and 168 were municipal. Additionally, a total of 947 minor permits were issued. EPA continued to review state NPDES program requests and program modifications. No full programs were approved, but two states received pretreatment program approval and three received general permitting authority. EPA and pretreatment states performed 356 local pretreatment program audits.

The Agency promulgated regulations covering state Sludge Management Programs and Permit Issuance codification of the 1987 Water Quality Act provisions and CWA Section 304(l); issued a final strategy on controlling CSOs; and proposed rules on stormwater application requirements and the pretreatment regulation revisions reflecting the Domestic Sewage Study.

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DRINKING WATER

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
APPROPRIATION					
Salaries & Expenses	$34,928.8	$39,217.4	$38,851.3	$45,296.3	$6,445.0
Abatement Control and Compliance	$60,568.4	$72,314.6	$71,383.5	$76,463.8	$5,080.3
Research & Development	$11,312.4	$10,867.3	$10,561.5	$10,877.2	$315.7
TOTAL, Drinking Water	$106,809.6	$122,399.3	$120,796.3	$132,637.3	$11,841.0
PERMANENT WORKYEARS	673.8	767.7	743.9	810.2	66.3
TOTAL WORKYEARS	716.0	767.7	768.0	810.2	42.2
OUTLAYS	$111,414.4	$124,177.3	$123,615.1	$133,914.3	$10,299.2
AUTHORIZATION LEVELS	The Safe Drinking Water Act of 1986 reauthorized this program at a level of $199,570.0 for 1989, $199,570.0 for 1990, and $199,570.0 for 1991.				

DRINKING WATER

OVERVIEW AND STRATEGY

EPA's goal, under the Safe Drinking Water Act (SDWA) as amended in 1986, is to assure that public water supplies are free of contaminants that may cause unacceptable health risks and protect ground-water resources by preventing the endangerment of underground sources of drinking water (USDW). EPA pursues a twofold approach, protecting drinking water at the tap and preventing contamination of ground-water sources of drinking water supplies.

The 1986 Amendments expand the Federal role in protecting drinking water at the tap, mandating sweeping changes in nationwide safeguards and new responsibility to enforce them in the event of state inaction. EPA's strategy is to usher in this new, comprehensive level of drinking water protection by maximizing voluntary compliance through a balance of enforcement presence, risk prevention and innovative partnerships. EPA has established its implementation priorities according to the degree of tangible human health risk at stake, focusing on four classes of contaminants with the highest health risks nationwide: microbiological pathogens, lead (and other corrosion by-products), radionuclides and disinfection chemical by-products. Similarly, enforcement priorities, embodied in the definition of PWS Significant Non-Compliance (SNC), are risk based.

EPA is also focusing on the prevention of contamination of valuable/vulnerable ground-water resources by assisting states in developing and implementing comprehensive ground-water protection strategies. These strategies will address both the full range of actual/potential sources of ground-water contamination and provide for wellhead protection activities in the areas around public water systems. In addition, EPA is targeting specific activities to protect drinking water sources from the harmful effects of injection of wastes and other fluids; in particular, EPA is addressing the vast number of diverse "miscellaneous," or Class V, injection wells.

Drinking Water Standard Setting

EPA defines its risk-reduction objectives for drinking water protection through promulgation of National Primary Drinking Water Regulations (NPDWRs). NPDWRs are developed for any contaminants "known or anticipated to occur" in public water systems (PWSs) that may have any adverse human health effects. The SDWA Amendments prescribe a stringent timetable for regulating 83 contaminants referenced in the law, a subsequent triennial cycle for listing and regulating additional contaminants, specific treatment technology requirements and monitoring for unregulated contaminants.

EPA sets standards that entail the full measure of public health protection prescribed by Congress; that is, Maximum Contaminant Levels (MCLs) that represent the level of maximum feasible health protection. Not only does this directly enhance protection at the tap, but also provides a comprehensive array of standards for use as health protection benchmarks in other environmental programs. At the same time, EPA will take into account the potential burden of the wholesale increase in the number of regulatory requirements, building into the standards themselves both flexibility and streamlined administrative requirements. These standards promote the states' freedom of action within the bounds set by SDWA mandates. The accompanying monitoring and reporting requirements are staggered, giving smaller systems more time to prepare for monitoring and compliance.

PWS Program Implementation

EPA's first priority is to support the expansion of state program capabilities, essential to implement the growing regulatory framework. The critical factor is state participation: under the Federal-state framework established by the SDWA, EPA relies on the states to realize its program objectives. Therefore, it is essential for the states to become agents for change. Not only must the states expand their commitment to broad protection of drinking water supplies, but they must also invest in developing new approaches to interacting with systems and other interested parties in order to increase their effectiveness. First, EPA is pioneering an approach that mobilizes all parties with any stake in safe drinking water (seeking to leverage scarce EPA/state resources) to seek change at the grass-roots level. Second, EPA is emphasizing "marketing" voluntary compliance across the regulated community, focusing on the thousands of small Public Water Systems (PWS) in the PWS regulatory community. EPA is encouraging states to go beyond the task of simply reaching so many systems (in order to prevent a vast number of inadvertent violations), and address the primary causes of system non-compliance (such as customer resistance to higher rates, inadequate facilities and poor training and expertise). This requires institutional innovations and technology transfer. To this end, EPA is sponsoring various demonstrations and initiatives to promote small-systems viability.

States have had notable success in maintaining and increasing systems compliance through their traditional programs, which themselves reflect a balance of preventative measures (regular surveillance of systems operations, review of planned facility changes, operator certification), technical assistance and an enforcement deterrent. Ultimately, however, additional requirements mean increased non-compliance. In the future, EPA will have to establish enforcement priorities on the basis of health risk, focusing on the prevalence of microbiological, lead, radionuclide and by-product contamination. As a first step, EPA has defined the category of SNC, which now governs enforcement priorities, on the basis of health risk. In 1990, EPA is targeting these most serious NPDWR violations, initiating Federal action on all SNC violators that the states have failed to bring into compliance. EPA is also introducing a series of internal reforms and new procedures for EPA/state liaison, aimed at improving PWS enforcement programs.

Underground Injection Control

EPA and 40 state primacy programs will continue to maintain regulatory coverage of 308,000 injection wells. However, EPA and the states will begin to address contamination risks from Class V wells. This category encompasses a wide variety of different well types that resist uniform regulatory treatment. Class V wells range from radioactive waste-disposal wells, service station and industrial drainage and disposal wells, to irrigation return wells. In October 1989, EPA issued a "Shallow Injection Well Program Strategy" outlining an action plan combining traditional regulatory controls (on the highest-risk well categories) with more innovative approaches to foster voluntary control practices. The strategy entails an analytical process employed by EPA and the states to screen the Class V universe and prescribe appropriate levels or forms of control, based on the level of potential endangerment to ground-water resources. In 1991, implementation will also be guided by the early results of EPA-funded demonstration projects designed to field test the best approaches to Class V controls which were funded in 1990. In 1991 the most intense shallow-well activities are likely to be the closure and enforcement of wells newly defined to be illegal "Class IV" injection wells, pursuant to the Hazardous Waste program's redefinition of the toxicity characteristic for designating waste as hazardous. A critical factor in a shallow well's contamination risk is its influence on USDW, and wellhead protection areas in particular. Therefore, Class V controls play an intrinsic role in the overall ground-water protection program.

Addressing the emerging problem of Class V wells complements and reinforces the Agency's efforts in regulating the principal classes of injection wells. Class II (oil and gas production and storage-related injection wells) compliance evaluations will continue as the remaining states complete their first five-year cycle of Class II file reviews. The program will emphasize both permitting and ensuring compliance with permit and statutory requirements of other UIC categories, particularly Class I and II. Where a state does not or cannot respond to violations in a timely and appropriate manner, EPA will take enforcement action.

Ground-Water Protection

In 1991, EPA will enhance assistance to states in developing and implementing ground-water protection activities that move beyond protection strategies to comprehensive ground-water protection programs. EPA will focus on expanding the capability of states to develop approaches that protect ground water from the total range of actual and potential sources of contamination, including those that are not Federally regulated. State ground-water protection programs will concentrate on integrating state protection efforts with Federal programs to assure compatibility between state and Federal activities. Particular emphasis will be on working with USDA to promote ground-water protection policies and approaches. Additionally, the Agency's ground-water protection program will assist state water agencies in developing hydrogeologic aspects of pesticides management plans. These state plans provide for protection methods tailored to area-specific differences in ground-water vulnerability.

EPA will initiate analysis of major economic sectors in order to identify and assess high risk sources of ground-water contamination that are not currently regulated. The Agency will oversee development and testing of best practices, e.g. siting criteria, technical controls and management practices, to prevent ground-water contamination from those unregulated sources found to be of greatest concern.

A critical component of a state comprehensive ground-water protection program includes activities targeted to high priority ground-water resources. A primary example of this type of targeting is the protection of areas and fields surrounding wells of public water systems, commonly known as wellhead protection. Thus, in 1991, EPA will assist states in developing wellhead protection programs to incorporate their comprehensive ground-water protection programs. The Agency will continue to provide extensive direct assistance to states in the delineation of wellhead protection areas and work with states in the assessment of specific sources of contamination and the development of risk management strategies. EPA will also support technical assistance projects on specific local issues related to the protection of wellhead areas/wellfields of public water systems. Special emphasis will be given to ensure that priorities and specific activities for controlling high risk Class V underground injection wells are targeted to wellhead protection areas.

In 1991, EPA will also assist states in building and strengthening their capabilities in the area of ground-water information management. EPA will implement a minimum data element set to ensure that ground-water data collected by or on behalf of the Agency is comparable, compatible and readily accessible to regional, state and local managers of ground-water protection programs, as well as to other Federal agencies. A directory of ground-water information will be updated and EPA will continue to facilitate the dissemination and exchange of information with the states on innovative practices and programs in ground-water protection.

Research and Development

In 1991 the Agency will continue to focus transport and fate research on ground-water contamination. Research will emphasize understanding the processes by which the transport of subsurface contamination is facilitated. Research on new approaches to delineate and manage ground-water quality within wellhead protection areas will continue.

The research program will continue to support methods development to detect ground-water contaminants, understand and predict their behavior, evaluate the viability and cost-effectiveness of in-situ restoration as a clean-up alternative, and support UIC regulatory efforts.

The Agency will develop data on the chemistry and toxicology of disinfectants used in place of chlorine, primarily ozone and chloramine and their reaction by-products. In the near future many municipalities will need to begin using ozone and chloramine as well as combinations of the two chemicals for drinking water disinfection. Currently, very little is known about either the spectrum of their by-products during disinfection or the toxicological properties of these chemicals and/or mixtures of chemicals. Research will continue to develop and validate biomarkers to quantify exposure and effects, with particular emphasis placed on the gastro-intestinal tract where the first exposure to chemicals occurs.

Consulting Services

Consulting services are used to supplement existing in-house expertise in the drinking water program. These services are utilized in the development and review of regulations, policy and guidance-documents pertaining to drinking water standards, PWS and UIC program implementation and the identification of emerging waterborne environmental or human health hazards.

DRINKING WATER

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE+ DECREASE- 1991 VS. 1990
Incremental Outputs				
UIC Permit Determinations				
- for existing and new facilities, by primacy states	8,352	5,228	5,228	0
- for existing and new facilities, by EPA	625	515	515	0
UIC Mechanical Integrity Testing	37,475	28,858	28,858	0
UIC Compliance Review	17,125	21,558	21,558	0
PWS Primacy Development Grants to Indian Tribes	1	2	4	+2
Enforcement Actions - PWS:				
Inspections	n/a	n/a	n/a	
Notices of Violation	237	427	527	+100
Administrative Orders	242	186	227	+41
Civil Litigation (new)	2	3	3	0
Criminal Litigation	0	0	0	0
Enforcement Actions - UIC:				
Inspections	107,038	72,034	72,034	0
Notices of Violation	n/a	n/a	n/a	
Administrative Orders	122	123	123	0
Civil Litigation (new)	1	4	4	0
Criminal Litigation	0	0	0	0
Cumulative Outputs				
PWS Primacy States	54	54	55	+1
UIC Primacy States (full and partial programs)	33/6	35/5	35/5	0
Designated Sole Source Aquifers	52	60	68	+8

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DRINKING WATER
Drinking Water Research

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM					
Scientific Assessment - Drinking Water					
Salaries & Expenses	$404.3	$505.1	$498.4	$663.0	$164.6
Research & Development	$266.1	$267.6	$261.2	$268.2	$7.0
TOTAL	$670.4	$772.7	$759.6	$931.2	$171.6
Monitoring Systems & Quality Assurance - Drinking Water					
Salaries & Expenses	$2,089.4	$2,314.9	$2,387.8	$2,545.2	$157.4
Research & Development	$2,215.8	$1,720.2	$1,698.1	$1,743.5	$45.4
TOTAL	$4,305.2	$4,035.1	$4,085.9	$4,288.7	$202.8
Health Effects - Drinking Water					
Salaries & Expenses	$2,926.0	$3,178.8	$3,154.7	$3,347.6	$192.9
Research & Development	$3,817.8	$3,086.3	$2,959.1	$2,915.6	-$43.5
TOTAL	$6,743.8	$6,265.1	$6,113.8	$6,263.2	$149.4
Environmental Engineering & Technology - Drinking Water					
Salaries & Expenses	$2,846.0	$3,406.0	$3,378.8	$3,483.2	$104.4
Research & Development	$1,836.6	$1,929.9	$1,877.3	$2,128.2	$250.9
TOTAL	$4,682.6	$5,335.9	$5,256.1	$5,611.4	$355.3
Environmental Processes & Effects - Drinking Water					
Salaries & Expenses	$1,678.2	$1,927.8	$1,789.3	$1,925.4	$136.1
Research & Development	$3,176.1	$3,863.3	$3,765.8	$3,821.7	$55.9
TOTAL	$4,854.3	$5,791.1	$5,555.1	$5,747.1	$192.0
TOTAL:					
Salaries & Expenses	$9,943.9	$11,332.6	$11,209.0	$11,964.4	$755.4
Research & Development	$11,312.4	$10,867.3	$10,561.5	$10,877.2	$315.7
Drinking Water Research TOTAL	$21,256.3	$22,199.9	$21,770.5	$22,841.6	$1,071.1
PERMANENT WORKYEARS					
Scientific Assessment - Drinking Water	8.2	8.0	8.0	8.0	0.0
Monitoring Systems & Quality Assurance - Drinking Water	35.3	37.8	39.8	38.8	-1.0
Health Effects - Drinking Water	55.6	58.2	58.2	58.2	0.0

DRINKING WATER
Drinking Water Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Environmental Engineering & Technology - Drinking Water	52.0	56.3	55.3	53.3	-2.0
Environmental Processes & Effects - Drinking Water	28.7	29.2	29.2	27.2	-2.0
TOTAL PERMANENT WORKYEARS	179.8	189.5	190.5	185.5	-5.0
TOTAL WORKYEARS					
Scientific Assessment - Drinking Water	8.4	8.0	8.0	8.0	0.0
Monitoring Systems & Quality Assurance - Drinking Water	35.8	37.8	39.8	38.8	-1.0
Health Effects - Drinking Water	59.3	58.2	58.2	58.2	0.0
Environmental Engineering & Technology - Drinking Water	52.9	56.3	55.3	53.3	-2.0
Environmental Processes & Effects - Drinking Water	29.7	29.2	29.2	27.2	-2.0
TOTAL WORKYEARS	186.1	189.5	190.5	185.5	-5.0

DRINKING WATER

Drinking Water Research

Principal Outputs by Objective

Objective 1: Develop Drinking Water Standards Based on Health Effects Through Risk Assessment Studies

1991:
- o Revise criteria documents on Phase IV and V contaminants and incorporate public comments. (Scientific Assessment)
- o Report on carcinogenic and reproductive effects of chloracedic acids (Health)
- o Report on the feasibility of conducting an epidemiologic study on the chronic effects of using ozone as a disinfectant. (Health)

1990:
- o Develop final risk assessments and criteria documents for Phase II chemicals. (Scientific Assessment)
- o Report on the mechanistic approaches to assess the interactions of drinking water contaminants. (Health)
- o Report on cancer risks associated with disinfection of drinking water (Health)

1989:
- o Developed health advisories and criteria documents. (Scientific Assessment)
- o Report on the carcinogenic and reproductive effects of Disinfectants/by-products. (Health)
- o Report on the target organ toxicity of drinking water contaminants. (Health)
- o Report on the chemistry and toxicology of chlorinated hydroxyfuranones. (Health)

Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards

1991:
- o Report on alternative disinfectants/disinfection by-products. (Engineering)
- o Report on disinfection of Legionella and associated bacteria in drinking water. (Engineering)

1990:
- o Develop and verify Legionella inactivation data for public plumbing systems. (Engineering)
- o Report on inactivation of Crytptosporidium oocysts. (Engineering)
- o Report on point-of-entry systems for removal of radon. (Engineering)

1989:
- o Report on radiation methods validation and intercomparison studies program for drinking water radiation quality assurance. (Monitoring)
- o Systems performance procedures for on-site evaluation and certification of drinking water monitoring laboratories. (Monitoring)
- o Report on pilot plant disinfection and disinfection by-products with ozone combined with chloramines and chlorine. (Engineering)

- o Report on treatment techniques to remove radon from small water supplies. (Engineering)
- o Report on lead leaching from water faucets. (Engineering)

Objective 3: Provide Scientific Data and Methods to Protect of Groundwater Resources

1991:
- o Provide report on the sampling variance caused by well construction, materials, and operations. (Monitoring)
- o Evaluate and adapt, where possible, existing oil exploration methods for groundwater monitoring. (Monitoring)

1990:
- o Provide improved methods for predicting contaminant movement and transformation. (Monitoring)
- o Laser-induced fluorescence for monitoring groundwater by fiber optics (Monitoring)
- o Report on the ozonization products in drinking water (Environmental Processes)

1989:
- o Report on sources of variability affecting groundwater monitoring data (Monitoring)
- o Report on fiber optics for monitoring groundwater contaminants (Monitoring)
- o Report on impacts of unregulated sources of groundwater contamination in wellhead protection areas (Environmental Processes)

DRINKING WATER

Drinking Water Research

Budget Request

The Agency requests a total of $22,841,600 supported by 185.5 total workyears for 1991, an increase of $1,071,100 and a decrease of 5.0 in total workyears from 1990. Of the request, $11,964,400 will be for the Salaries and Expenses appropriation and $10,877,200 will be for the Research and Development appropriation, increases of $755,400 and of $315,700, respectively.

Program Objectives

The Drinking Water research program support States and the Office of Drinking Water (ODW) in implementing the Safe Drinking Water Act (SDWA). The research program consists of the following objectives:

Objective 1: Provide Scientific Basis for Drinking Water Standards. Research provides health assessment information to support the Office of Drinking Water in revising regulations to control drinking water contaminants under SDWA. The health research program also assists States in determining the cause of outbreaks from waterborne infectious diseases and assessing the hazard of humans exposure to infectious agents through drinking water.

Objective 2: Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. Research provides analytical procedures to monitor drinking water contaminants. Engineering research evaluates treatment processes and costs to support ODW regulatory decision-making.

Objective 3: Provide Scientific Methods and Data for Protection of Ground-Water Resources. Research provides the scientific basis for the protection of underground drinking water sources to implement Section 1421 and 1414 of the SDWA. Research activities are done in coordination with the Pesticides and Hazardous Waste Programs.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $931,200 supported by 8.0 total workyears for this program, of which $663,000 will be for the Salaries and Expenses appropriation and $268,200 will be for the Research and Development appropriation. This represents an increase of $164,600 in the Salaries and Expenses appropriation, increase of $7,000 in the Research and Development appropriation and no change in total workyears. The increase in Salaries and Expenses reflects a general enhancement of the in-house drinking water research program. The increase in the Research and Development appropriation represents an administrative increase.

Provide Scientific Basis for Drinking Water Standards. This program will provide quantitative health risk assessments, from exposure to drinking water contaminants, to develop drinking water standards. Research work includes responding to public comments on specific Phase IV and Phase V chemicals. Support is provided for revising corresponding criteria documents and preparation of final criteria for defined phase VI chemicals. Continued assistance will be given for the promulgation of Phase II & V regulations.

1990 Program

In 1990, the Agency is allocating a total of $759,600 supported by 8.0 total workyears for this program, of which $498,400 is from the Salaries and Expenses appropriation and $261,200 is from the Research and Development appropriation.

In 1990, this program is finalizing disposition of public comments received in the Phase II chemical and assisting the final promulgation of the Phase II regulations. Three Phase four criteria documents and two Phase V are being prepared. 13 chapters quantifying toxicological effects for Phase VI chemicals are being prepared. The program is also continuing to provide technical support to the regions and states.

1989 Accomplishments

In 1989, the Agency obligated a total of $670,400 supported by 8.4 total workyears for this program, of which $404,300 was from the Salaries and Expenses appropriation and $266,100 was from the Research and Development appropriation.

Major accomplishments include finalization of documents on 19 Phase II chemicals, preparation of external review documents for three Phase IV chemicals and risk assessment and criteria documents for seven Phase V chemicals. Quantification of toxicological effects chapters and criteria documents for six specific Phase VI chemicals were also prepared.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $4,288,700 supported by 38.8 total workyears for this program, of which $2,545,200 will be for the Salaries and Expenses appropriation and $1,743,500 will be for the Research and Development appropriation. This represents an increase of $157,400 in the Salaries and Expenses appropriation, an increase of $45,400 in the Research and Development appropriation, and an reduction of 1.0 in total workyears. The increase in Salaries and Expenses reflects a general enhancement of the in-house support for the monitoring program. The decrease in workyears reflect a general realignment of agency priorities.

Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. This request will continue quality assurance activities supporting states, regions and other user communities by providing: high-purity chemical, radiochemical and microbiological reference materials, and the transfer of technologies including analytical methods and quality assurance of protocols. Efforts will continue to determine microbial quality of drinking water, methods for isolation and detection of Giardia, Cryptosporidium and Legionella, and use of other molecular biological techniques to improve and validate microbial analysis and to reduce the cost of testing.

Provide Scientific Methods and Data for Protection of Groundwater Resources. Research will provide both technical information and improved methods for predicting contaminant movement and transformation to better assess human exposure from groundwater contamination. Research will include evaluating, identifying and assessing technologies for improving injection well practices, assessing fluid movement from injection wells and developing laser induced fluorescence for monitoring groundwater by fiber optics. Major emphases will be placed on continuous monitoring and sample extraction devices to improve monitoring in wellhead protection areas, development of database management systems, as well as, geophysical surveys for characterization of injection wells.

1990 Program

In 1990, the Agency is allocating a total of $4,085,900 supported by 39.8 total workyears for this program, of which $2,387,800 is from the Salaries and Expenses appropriation and $1,698,100 is from the Research and Development appropriation.

In 1990, the monitoring program is expediting methods validation work to meet the new drinking water regulations for organic chemical contaminants. The program provides analytical procedures to monitor drinking water contaminants including development of procedures for analysis of radioactive contaminants and improved coliform analysis methods.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,105,200 supported by 35.8 total workyears for its monitoring and quality assurance program in drinking water, of which $2,089,400 was from the Salaries and Expenses appropriation and $2,015,800 was from the Research and Development appropriation.

In support of the revised National Primary Drinking Water Regulations (NPDWR), chemical and microbiological methods were developed and/or standardized for the determination of volatile, semi-volatile, and non volatile organic compounds, coliform bacterial contamination, radionuclides, and groundwater contamination. Inter-laboratory comparisons were performed to assess the performance of chemical microbiological methods for analysis of contaminants regulated under NPDWR and laboratories were certified to do drinking water analysis. Quality assurance support was provided for EPA, State, regional, and contract laboratories.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $6,263,200 supported by 58.2 total workyears for this program, of which $3,347,600 will be for the Salaries and Expenses appropriation and $2,915,600 will be for the Research and Development appropriation. This represents an increase of $192,900 and a decrease of $43,500 respectively, and no change in the total workyears. The increase in Salaries and Expenses appropriation reflects a general enhancement of the in-house research program. The decrease in the Research and Development appropriation reflects an administrative adjustment.

Provide Scientific Basis for Drinking Water Standards. The health research program will support the Office of Drinking Water (ODW) in its effort to develop recommended drinking water Maximum Contaminant Level Goals (MCLGs) and MCLs for twelve disinfectants and more than eighteen types of disinfection by-products. In response to the Safe Drinking Water Act Amendments, research will be conducted to isolate, identify, synthesize and characterize the toxicological effects of major disinfectant by-products that present the highest probable health risks.

Research will focus on the effects of disinfectants to be used as an alternative to chlorine, such as ozone and chloramine, individually and in combined mixtures. Research will begin to develop and validate biomarkers to quantify exposure and effects, particularly on the gastrointestinal tract where the first exposure to chemicals occurs.

Risk extrapolation methodology will be developed for determining human exposure to chemical mixtures as they occur in source waters for drinking water. Epidemiology studies will continue to be conducted to determine the association between the use of disinfectants and chronic health effects (cancer and cardiovascular disease).

1990 Program

In 1990, the Agency is allocating a total of $6,113,800 supported by 58.2 total workyears for this program, of which $3,154,700 is from the Salaries and Expenses appropriation and $2,959,100 is from the Research and Development appropriation.

The research program is supporting the Office of Drinking Water's efforts to develop maximum contaminant levels and health advisories for specific chemicals found in drinking water. Research efforts are developing toxicological and epidemiological data to support maximum contaminant level goals and fill gaps for the first set of 83 contaminants for which regulations are required. This includes research on disinfectants, disinfectant by-products and other organic and inorganic contaminants. Other research is being conducted to improve extrapolation methods used in risk assessment.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,743,800 supported by 59.3 total workyears for its monitoring and quality assurance program in drinking water, of which $2,926,000 was from the Salaries and Expenses appropriation and $3,817,800 was from the Research and Development appropriation.

Major research accomplishments were: a report on target organ toxicities for chemicals evaluated for drinking water health advisories; a report on the analysis of non-genotoxic liver cancer from drinking water contaminants and research determining genotoxic effects of organic chemicals in drinking water for incorporation into MCLGs; a report on research that determined target organ toxicities of disinfectants and disinfectant by-products required under the Safe Drinking Water Act Amendments; and a report on an epidemiological determination of health hazards associated with low-level occurrence of viruses.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $5,611,400 supported by 53.3 total workyears for this program, of which $3,483,200 will be for the Salaries and Expenses appropriation and $2,128,200 will be for the Research and Development appropriation. This represents an increase of $104,400 in the Salaries and Expenses appropriation, with an increase of $250,900 in the Research and Development appropriation and a decrease of 2.0 in total workyears. The increase in Salaries and Expenses reflects a general enhancement of in-house support for the engineering programs and the increase in the Research and Development appropriation represents support for the Administrator's pollution prevention initiative. The workyear reduction reflects a general realignment of agency priorities.

Provide Engineering Technologies and Monitoring Data for Drinking Water Standards. This request will evaluate processes for removal of volatile organic compounds (VOCs), pesticides, and radionuclides for setting standards and implementing regulations. Development of new information on treatment systems performances and costs analyses of proposed treatment systems will continue. The request will support evaluation of disinfectants and their by-products and factors contributing to microbial deterioration of water quality in distribution systems. Research emphasizing technologies especially adaptable to small systems will continue as a priority.

The major emphases supporting groundwater research will be in continuous monitoring and sample extraction devices and the development of data base management systems for wellhead protection areas. In addition, research will continue to evaluate the usefulness of geophysical surveys for characterization of injection wells.

1990 Program

In 1990, the Agency is allocating a total of $5,256,100 supported by 55.3 total workyears for this program, of which $3,378,800 is from the Salaries and Expenses appropriation and $1,877,300 is from the Research and Development appropriation.

Research is evaluating treatment processes and costs to support ODW regulatory decision-making. Cost data ares being compiled for unit processes to do cost-effectiveness analyses of proposed treatment systems. Factors which contribute to deterioration of water quality in distribution systems and methods for control are being investigated. Research emphasizing technology particularly adaptable to small systems is also being performed.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,682.600 supported by 52.9 total workyears for this program, of which $2,846,000 was from the Salaries and Expenses appropriation and $1,836,600 was from the Research and Development appropriation.

Significant engineering research accomplishments available to regulators, utilities and the community at large, include: 1) determining the effectiveness of granular activated carbon treatment technology to remove radon from drinking water, 2) report on treatment techniques to remove radon from small water supplies, 3) report on lead leaching from water faucets, and 4) report on determining the conditions for maximum inactivation of the MS2 coliphage virus which are believed to be the conditions necessary for effectively inactivating other similar bacterial viruses.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $5,751,100 supported by 27.2 total workyears for this program, of which $1,925,400 will be for the Salaries and Expenses appropriation and $3,821,700 will be for the Research and Development appropriation. This represents an increase of $136,100 in the Salaries and Expenses appropriation, and an increase of $55,900 in the Research and Development appropriation. The total workyears are decreased by 2.0 workyears. The increase in Salaries and Expenses reflects the general enhancement of in-house support of the Processes and Effects programs; the increase in the Research and Development appropriation reflects an administrative adjustment.

Provide Scientific Methods and Data for Protection of Ground Water Resources. This program will focus on methods development and studies of surface transport and fate processes. Research studies will be conducted on in-situ aquifer restoration techniques which may potentially lead to a more cost-effective cleanup of aquifers. Coordination with the Hazardous Waste and Pesticides Programs occurs in this area of research.

Research will provide field evaluation of movement and transformation of wastes from underground injection wells. The program will provide technical assistance for the Wellhead Protection Program, major technology transfer programs and support for the Underground Injection Control (UIC) Program.

1990 Program

In 1990, the Agency is allocating a total of $5,555,100 supported by 29.2 total workyears for this program, of which $1,789,300 is from the Salaries and Expenses appropriation and $3,765,800 is from the Research and Development appropriation.

Research is focusing on development and improvement methods to measure key subsurface parameters that influence contaminant behavior as well as methods that predict concentrations of contaminants. The program supports research on biotransformation for aquifer restoration and cost effectiveness of in-situ aquifer restoration techniques. The Underground Injection Control (UIC) program is studying the fate and transport of wastes and mechanical integrity of well casings. Research supporting wellhead protection is providing data on assimilative capacity of soils around wells and data necessary to define the area needing protection around the wellhead.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,854,300 supported by 29.7 total workyears for this program, of which $1,678,200 was from the Salaries and Expenses appropriation and $3,176,100 was from the Research and Development appropriation.

The 1989 accomplishments were: 1) report on facilitated transport of organic pollutants with a strong affinity to water, 2) report on in-place restoration of contaminated aquifers, 3) report on methods for determining the mechanical integrity of wells, and 4) a five year research plan for wellhead protection (in collaboration with the Office of Groundwater Protection).

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DRINKING WATER
Drinking Water Criteria, Standards & Guidelines

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Criteria, Standards & Guidelines						
Salaries & Expenses		$4,567.3	$5,243.2	$4,625.7	$4,688.0	$62.3
Abatement Control and Compliance		$7,578.8	$7,027.5	$6,937.9	$6,578.0	-$359.9
	TOTAL	$12,146.1	$12,270.7	$11,563.6	$11,266.0	-$297.6
Drinking Water Implementation						
Salaries & Expenses		$2,680.1	$2,927.9	$2,883.8	$3,085.5	$201.7
Abatement Control and Compliance		$2,914.8	$4,764.4	$4,703.6	$5,639.3	$935.7
	TOTAL	$5,594.9	$7,692.3	$7,587.4	$8,724.8	$1,137.4
TOTAL:						
Salaries & Expenses		$7,247.4	$8,171.1	$7,509.5	$7,773.5	$264.0
Abatement Control and Compliance		$10,493.6	$11,791.9	$11,641.5	$12,217.3	$575.8
Drinking Water Criteria, Standards & Guidelines	TOTAL	$17,741.0	$19,963.0	$19,151.0	$19,990.8	$839.8
PERMANENT WORKYEARS						
Criteria, Standards & Guidelines		69.5	70.5	70.5	71.0	.5
Drinking Water Implementation		40.2	45.9	45.9	45.9	0.0
TOTAL PERMANENT WORKYEARS		109.7	116.4	116.4	116.9	.5
TOTAL WORKYEARS						
Criteria, Standards & Guidelines		76.8	70.5	70.5	71.0	.5
Drinking Water Implementation		41.3	45.9	45.9	45.9	0.0
TOTAL WORKYEARS		118.1	116.4	116.4	116.9	.5

DRINKING WATER

Drinking Water Criteria, Standards and Guidelines

Budget Request

The Agency requests a total of $19,990,800 supported by 116.9 total workyears for 1991, an increase of $839,800 and no change in total workyears from 1990. Of the request $7,773,500 will be for the Salaries and Expenses appropriation and $12,217,300 will be for the Abatement, Control and Compliance appropriation, an increase of $264,000 for Salaries and Expenses and $575,800 for Abatement, Control and Compliance. This represents no change in total workyears from the Salaries and Expenses appropriation, and an increase of 0.5 workyears in the Reregistration and Expedited Processing Revolving Fund.

CRITERIA, STANDARDS AND GUIDELINES

1991 Program Request

The Agency requests a total of $11,266,000 supported by 71.0 total workyears for this program, of which $4,688,000 will be for the Salaries and Expenses appropriation and $6,578,000 will be for the Abatement, Control and Compliance appropriation. Total workyears will include 70.0 from the Salaries and Expenses appropriation and 1.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $62,300 for Salaries and Expenses, a decrease of $359,900 for Abatement, Control and Compliance, no change in Salaries and Expenses total workyears and an increase of 0.5 workyears from the Reregistration and Expedited Processing Revolving Fund (FIFRA '88). The increase in Salaries and Expenses reflects increased personnel and support costs; the decrease in Abatement, Control and Compliance reflects completion of the National Pesticides Survey fieldwork. The increase in FIFRA workyears will support the increased volume of pesticide reregistration reviews.

In 1991, EPA will continue to define its risk-reduction objectives for drinking water via development of contaminant standards. National Primary Drinking Water Regulations (NPDWRs) promulgated through 1991 will reduce substantial existing health risks from pathogenic organisms, lead and radionuclides. Maximum Contaminant Levels (MCLs) for inorganic and synthetic organic chemicals will prevent additional risks from emerging into significant health hazards. Monitoring for unregulated contaminants, along with extra-regulatory scientific-data assessments (resulting in valuable guidance, such as Health Advisories) complete the framework for averting future risks.

Standards for 38 inorganic and synthetic-organic compounds (I/SOC) will be promulgated in 1991. Standards for radionuclides and the remaining 24 toxic chemical contaminants specified by the Safe Drinking Water Act (SDWA) Amendments will be finalized. A standard for arsenic will be promulgated separately to permit further consideration of the scientific evidence about health effects. Joint Maximum Contaminant Level Goals (MCLG) and NPDWRs for multiple disinfectants and disinfection by-products will be proposed. Setting standards for these set of contaminants will be complex since the potential for chronic toxicity must be carefully weighed against the substantial reduction in risk from pathogenic microorganisms. Standards will also be proposed for the other chemicals on the 1988 Contaminant Priority List. The second list of regulatory candidates will be published in 1991 in accordance with the statutory deadline under the SDWA.

In 1991 complete results of the National Pesticides Survey will be presented providing a comprehensive picture of the incidence and extent of a wide range of pesticides in drinking water wells. Further analysis will focus on the relations between incidence and potential causal factors. This analysis will provide guidance to the drinking water and pesticide programs, in regulatory considerations. For reregistration activities related to the 1988 Reregistration and Expedited Processing Revolving Fund, trust fund resources will provide drinking water program review of registrant-submitted scientific data that may effect drinking water standards, health advisories and risk assessments. These drinking water benchmarks play a crucial role in pesticide use restrictions to prevent ground-water contamination. Assistance will be provided to the Regions and states on implementation of the Lead Contamination Control Act and reducing risk from radon contamination of drinking water supplies. A 1991 initiative will support the study of drinking water issues at university-based pollution prevention centers. A complementary initiative will support programs on the prevention of lead contamination within distribution systems.

1990 Program

In 1990 the Agency is allocating a total of $11,563,600 supported by 70.5 total workyears for this program, of which $4,625,700 is from the Salaries and Expenses appropriation and $6,937,900 is from the Abatement, Control and Compliance appropriation. Total workyears include 70.0 from the Salaries and Expenses appropriation and 0.5 from the Reregistration and Expedited Processing Revolving Fund.

Regulatory standards proposed in 1990 include rules for radionuclides (including radon) and remaining toxic-chemical compounds specified by the SDWA Amendments. A revised MCLG and NPDWR for lead and corrosion control is being promulgated to address the significant health risks from the presence of lead in drinking water. The Regions and states are being supported to reduce lead in drinking water, with emphasis on lead in school water supplies, as mandated under the Lead Contamination Control Act.

As required by the 1986 SDWA Amendments, the Agency is reviewing information on fluoride to ensure that the MCL promulgated in 1986 reflects current levels of scientific and technical knowledge. In addition, the Agency is coordinating with other Federal agencies to ensure the appropriate incorporation of drinking water standards into their regulations and policies. Agency staff are working with the Department of Housing and Urban Development to incorporate the revised language and practices into their regulation of Federal Housing Administration (FHA) mortgages.

The last samples for the National Pesticide Survey are being collected. Plans for data analysis are being finalized. Analysis of toxicological data in support of the pesticide reregistration process continues in accordance with the accelerated schedule of the 1988 Amendments to FIFRA.

1989 Accomplishments

In 1989, the Agency obligated $12,146,100 supported by 76.8 total workyears for this program, of which $4,567,300 was from the Salaries and Expenses appropriation and $7,578,800 was from the Abatement, Control and Compliance appropriation. Total workyears include 76.7 from the Salaries and Expenses appropriation and 0.1 from the Reregistration and Expedited Processing Revolving Fund.

The Agency proposed MCLGs and NPDWRs for 38 I/SOCs and promulgated the microbiological NPDWRs and the Surface Water Treatment Rules. Specifically, the Surface Water Treatment Rules revise the interim coliform MCL and establish treatment requirements for public water systems with surface water sources. The National Pesticide Survey sampled 840 public and private drinking water wells, analyzing for an array of 127 compounds.

The program conducted a range of activities in support of other legislative mandates. A testing protocol to detect the presence of radon was developed in recognition of the hazards posed by radon contamination of drinking water. A list of drinking water coolers containing lead was distributed and a guidance document to assist States in determining the degree of lead contamination in school drinking water was developed. Pesticide data review began in support of the FIFRA reregistration process. Priority lists were developed in support of FIFRA activities and coordinated to correspond to drinking water regulatory activities.

DRINKING WATER IMPLEMENTATION

1991 Program Request

The Agency requests a total of $8,724,800 supported by 45.9 total workyears for this program, of which $3,085,500 will be for the Salaries and Expenses appropriation and $5,639,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $201,700 for Salaries and Expenses and $935,700 for Abatement, Control and Compliance, and no change in total workyears. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase in Abatement, Control and Compliance reflects additional efforts to promote voluntary compliance with wholesale changes to drinking water regulations.

The responsibility for meeting the new challenges of the SDWA Amendments rests with the states. A recent survey shows that states will need to spend an additional $184 million through 1992 for start-up costs to implement new drinking water standards and $152 million annually will be necessary thereafter to comply with the regulations. The Agency will continue its coordinated effort to assist the states in building water programs capacity, including new demands for drinking water protection. The Agency will work with states in developing funding options such as fees, dedicated taxes, bonding, and state revolving funds to support their drinking water programs.

EPA will also intensify its efforts to resolve the problems of small-systems compliance through its ongoing mobilization initiative. Mobilization fosters action-oriented partnerships with all parties with any stake in safe drinking water. The goal is to expand upon state and Federal efforts in order to realize the human health benefits expected from the 1986 SDWA Amendments. Small systems are the principal implementation hurdle because they typically have low revenues, high fees, poor financial capabilities and a lack of technical knowledge. Over 90% of current violations are attributable to these systems. EPA will work with national non-profit and private organizations to provide technical and managerial assistance and training to owners and operators of these systems. An important theme within this initiative will be to facilitate a public-private partnership to promote simple and affordable treatment technologies for use by small systems. A major task will be to educate the public (especially those served by small systems) in drinking water issues to increase readiness to pay for needed quality improvements. EPA will also target educational efforts to local health officials who are most often involved in local contamination problems. Finally, EPA will work with state and local officials to address the broader issue of institutional change, creating new mechanisms to deal with small systems more effectively. Together, EPA and other parties will try new ways to ensure small-system viability, develop strategies for full-cost pricing and simplify rate increase procedures.

EPA provides program direction for two national programs mandated by the SDWA, Public Water System Supervision (PWS) and Underground Injection Control (UIC). Priorities will focus on facilitating state adoption of PWS program requirements as new drinking water standards are promulgated and enabling states to maintain the lead for implementation. In 1991 the focus will be on timely state incorporation of the Surface Water Treatment and Total Coliform rules, development of implementation plans for the lead and copper rules and adoption of the chemical Maximum Contaminant Levels (MCL). EPA will issue guidance on various implementation issues as they arise. In the UIC program, technical modifications to existing regulations covering mechanical integrity testing and reporting requirements for Class II wells will be promulgated. Guidance on financial responsibility for abandoned wells will be developed.

The Agency will continue implementation of the Shallow Injection Well strategy which combines traditional regulatory efforts with innovative approaches. The program will emphasize integration with the wellhead protection program and with the Resource Conservation and Recovery Act (RCRA) program, whose Toxic Characteristic Leaching Procedure (TCLP) will impact the injection of hazardous waste. Outreach for assistance to Indian tribes will continue in their efforts to qualify for primacy for the public water systems and underground injection control programs.

1990 Program

In 1990, the Agency is allocating a total of $7,587,400 supported by 45.9 total workyears for this program of which $2,883,800 is from the Salaries and Expenses appropriation and $4,703,600 is from the Abatement, Control and Compliance appropriation.

Following promulgation of the revised State primacy regulations early this year, the Agency is developing guidance that outlines the requirements states must meet to maintain primacy. Guidance on variances and exemptions, site-specific compliance decisions, and public notification are also being developed. Outreach to owners and operators, national organizations and states continues for the surface water treatment and total coliform rules. Guidance to support implementation of these specific rules is being developed. The review of state program revision requests will be coordinated to ensure an expeditious and uniform process. The Agency has held workshops for Regional personnel to educate them on the technical and implementation issues of these new rules.

In 1990, the state program capacity initiative is targeting assistance to ten states for development of their implementation strategies of the 1986 Amendments. These strategies include developing specific funding options appropriate for each state and/or developing an effective communications strategy to increase public knowledge of drinking water issues. The Agency is working with the National Conference of State Legislatures on these issues. As requested, contact will be made with individual state officials. A book of case studies detailing successful creative funding solutions is being published and disseminated.

In support of the needs of small systems, the Agency is sponsoring several pilot projects designed to serve as possible models. These projects include the formation of a cooperative of 11 mobile home park owners to share services and achieve economies of scale from joint purchasing and a compliance improvement project with state, county and state rural water association participation. Six pilot projects are being funded by the private sector to demonstrate affordable effective technologies appropriate for small systems. In addition, outreach activities to establish an informed and supportive public on drinking water issues is continuing. National Drinking Water Week participation is being expanded with increasingly visible corporate sponsorship and additional organizations.

The UIC program has undertaken a major mid-course evaluation of the key control provisions for Class II wells. Revisions in process include regulations to address construction practices for new injection wells; additional guidance to address problem areas such as disposal practices at commercial facilities and procedures for temporarily abandoned wells; and further studies of problems posed by abandoned Class II wells. A regulatory modification to clarify the 1984 rule in such areas as mechanical integrity testing and reporting requirements is being proposed. The Agency is developing and implementing expanded regulatory controls and guidance for high risk class V wells.

The Agency is continuing its outreach to Indian tribes; applications for treatment as States and for development grants are being evaluated. A procedures handbook for both the PWS and UIC programs is being developed to be used in conjunction with workshops to inform tribes of primacy requirements and determining if becoming a primacy agent is beneficial.

1989 Accomplishments

In 1989, the Agency obligated $5,594,900 supported by 41.3 total workyears for this program, of which $2,680,100 was from the Salaries and Expenses appropriation and $2,914,800 was from the Abatement, Control and Compliance appropriation.

Seventeen state primacy revision requests to implement the volatile organic contaminant regulations were reviewed and seven were approved by EPA. Several workshops and conferences on the surface water treatment and total coliform rules were conducted. A joint study with the Association of State Drinking Water Administrators on the costs of implementing the SDWA amendments was completed. As a result, the strategy to build state capacity was designed.

In the UIC program, a shallow well injection strategy was issued. A mid-course evaluation of Class II injection wells and a study of state financial responsibility practices were initiated.

A four state study on ensuring the future viability of new small water systems was published. Publications on public notification, volatile organic contaminants, and lead were distributed to states, organizations and the general public. The first Indian tribe application for treatment as a State was approved and the first development grant was awarded.

Self assessment manuals and a resource guide were published. These were targeted toward mobile home pakrs systems, homeowner associations, and publicly owned systems.

DRINKING WATER
Drinking Water State Program Resource Assistance

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Public Water Systems Supervision Program Grants						
Abatement Control and Compliance		$33,042.8	$39,822.2	$39,311.5	$47,450.0	$8,138.5
	TOTAL	$33,042.8	$39,822.2	$39,311.5	$47,450.0	$8,138.5
Underground Injection Control Program Grants						
Abatement Control and Compliance		$10,120.3	$11,322.2	$11,177.8	$10,500.0	-$677.8
	TOTAL	$10,120.3	$11,322.2	$11,177.8	$10,500.0	-$677.8
Special Studies & Demonstrations						
Abatement Control and Compliance		$3,000.0	$4,430.5	$4,374.1	$1,000.0	-$3,374.1
	TOTAL	$3,000.0	$4,430.5	$4,374.1	$1,000.0	-$3,374.1
TOTAL:						
Abatement Control and Compliance		$46,163.1	$55,574.9	$54,863.4	$58,950.0	$4,086.6
Drinking Water State Program Resource Assistance	TOTAL	$46,163.1	$55,574.9	$54,863.4	$58,950.0	$4,086.6

DRINKING WATER

Drinking Water State Program Resource Assistance

Budget Request

The Agency requests a total of $58,950,000 for 1991, an increase of $4,086,600 from 1990. All of the request will be for the Abatement, Control and Compliance appropriation.

PUBLIC WATER SYSTEMS SUPERVISION PROGRAM GRANTS

1991 Program Request

The Agency requests a total of $47,450,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $8,138,500. The increase reflects additional program activities resulting from the requirements of the Safe Drinking Water Act (SDWA) Amendments of 1986. EPA Regions will continue to use allotments from the Abatement, Control and Compliance appropriation for direct implementation of the PWS Supervision program in non-primacy states and on Indian lands, including travel.

The Public Water System (PWS) program, at both the Federal and state level, will implement expanded drinking water protection requirements. In order to meet the new demands, the EPA and state programs will assume a new role of "marketing" new requirements to seek maximum voluntary compliance. By working with the drinking water community to educate and inform them about the new requirements, EPA and the states will complement traditional compliance programs (which themselves reflect a balance of risk-prevention measures, technical assistance and enforcement deterrence). Emphasis will be placed on reaching the vast number of small community and non-transient systems, the most troublesome PWSs with respect to current compliance and those least capable of assimilating a multitude of new requirements. Discounting any states losing or renouncing PWS primacy, Wyoming will become the lone non-primacy state when Indiana assumes primacy in 1991.

Federal support for state implementation of national standards will be the catalyst for even greater state program expansion. First, increased support to states will leverage greater commitment from state authorities in the form of higher state program budgets, innovative program funding and/or greater regulatory program productivity. Second, these grants will support mobilization and technology-transfer activities at the state level. An important element of this effort will be state-initiated institutional innovations and compliance tools, such as rules to ensure new systems are financially viable and measures to help existing systems find the means to become self-sufficient (via consolidation with larger systems). Finally, the grants will assist states in maintaining compliance with existing program requirements while enforcing the new requirements as they become effective.

1991 marks a turning point for state programs, confronting implementation of the first major risk-reduction provisions. The states will begin to enforce new microbiological monitoring requirements affecting all 200,000 PWSs nationwide. Systems will be responsible for increased monitoring in the event of coliform detection and for compliance with a new MCL. Increased monitoring will reduce the risk of infectious disease by providing a more accurate measure of systems general microbiological contamination. However, the immediate effect will likely be a larger number of initial violations. Concurrently, states will be implementing the first elements of the surface water treatment rule (SWTR). These include carrying out the task of reviewing 9200 individual surface-source systems and prescribing treatment upgrades, specific treatment performance requirements and compliance schedules. As a result, the risks of a waterborne disease outbreaks will be reduced for 83 million people.

Finally, as the lead regulation becomes effective in late 1991, states will be making the necessary changes to their regulatory authorities, working with the 3200 largest systems to begin the process of monitoring lead concentrations in water delivered to consumers and planning corrective action (e.g., instituting corrosion control measures). States will continue to provide technical assistance and training to schools, day care centers and non-residential buildings to identify and remedy lead contaminated drinking water coolers. Outreach and training activities will be conducted by the states on corrosion control and lead ban requirements.

1990 Program

In 1990, the Agency is allocating a total of $39,311,500 for this program, all of which is from the Abatement, Control and Compliance appropriation.

The grant program supports 54 state primacy programs, three EPA direct implementation programs and programs on Indian lands. EPA Regions use allotments for direct implementation of the PWS programs in non-primacy states and on Indian lands, including travel. States and EPA are engaged in implementing new and revised standards to apply and enforce maximum contaminant levels (MCLs) for microbiological contaminants and the treatment techniques for surface water systems. They are involved in enforcing an array of regulations including eight volatile organic contaminants (VOCs) and certifying state laboratories for these and forthcoming contaminants. Major activities also include the elimination of lead-content plumbing supplies, remedying lead contaminated drinking water in schools and implementation of a lead/corrosion control regulation. Indian tribal authorities with certification for treatment as a state are eligible to administer and enforce substantial elements of a PWS program and are also eligible for PWS grants to develop such programs. Grant funds are used to support EPA direct implementation activities, including travel.

Grants provide basic program operation such as laboratory certification, on-site evaluations and technical assistance, laboratory analysis, sanitary surveys, and compliance and enforcement actions. States and EPA assist communities and systems with continuing incidence of contamination by toxic chemicals and disease outbreaks. States take action against PWSs in violation of regulations. Compliance/enforcement activities are targeted at all systems in violations, with particular emphasis on eliminating all significant noncompliers.

1989 Accomplishments

In 1989, the Agency obligated a total of $33,042,800 for this program, all of which was from the Abatement, Control and Compliance appropriation.

The PWS grant program continued to support the primacy programs of 54 states and territories and EPA direct implementation program activities including analytical services, sanitary surveys, training, disease surveillance, on-site technical activities, and data management. Funds were also used to support EPA direct implementation activities for the drinking water program, including travel associated with these activities.

States supervised compliance with drinking water regulations, revised their legal authorities to accommodate new MCLs, expanded state laboratory certification capability, and provided assistance in monitoring for regulated and unregulated contaminants. States continued the emphasis on system compliance and took action against violations of drinking water standards. States began implementing program changes to accommodate the new MCLs for microbiological contaminants and their SWTR. Enforcement efforts continued on banning lead-content plumbing materials. In addition, states began enforcement of the public notification requirements and MCLs for VOCs. Indiana was awarded a start-up grant to support the primacy-program development, with delegation expected in early 1991. The first Indian tribe to qualify for treatment as a state received a grant to develop a suitable PWS program for primacy designation.

UNDERGROUND INJECTION CONTROL PROGRAM GRANTS

1991 Program Request

The Agency requests a total of $10,500,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $677,800 from 1990. The decrease reflects no further need to federally support demonstration projects for control of Class V injection practices.

Underground Injection Control (UIC) grants will support programs to protect underground sources of drinking water (USDW) from contamination through underground injection in all 57 states and territories, as well as on Indian lands. Where states and Indian tribal authorities have failed to assume UIC primacy, EPA will use grant allotments to support direct implementation of Federal UIC requirements, including travel.

States and Regions will enhance their Class IV and V well efforts following the Agency Shallow Injection Well Strategy. This strategy, combining traditional regulatory efforts and innovative non-regulatory approaches to protect drinking water sources and other critical ground waters, complements the Agency's Wellhead Protection efforts. EPA's Toxic Characteristic Leaching Procedure (TCLP) rule will have a major impact. Many wells that inject service station, industrial process and radioactive disposal wastes will be reclassified into the banned Class IV category. States will initiate immediate closure, remediation and enforcement actions against these wells. States and Regions will assimilate the experience of completed and ongoing demonstration projects to promote innovative state solutions and develop geographically tailored best management practices for remaining Class V wells.

States and EPA Regions will continue to permit new Class I and Class II wells and repermit Class I wells. States and Regions continue compliance reviews to ensure that safeguards on all permitted or rule-authorized Class I, II, III, or permitted Class V wells are comprehensively evaluated on a regular basis. These compliance reviews replace the five-year cycle of file reviews. EPA and state programs will implement revisions to existing UIC regulations and programs for Class II wells based on the 1989-1990 mid-course evaluation. In addition, EPA and the states will continue to observe on-site mechanical integrity tests, inspect and review plugged and abandoned wells, review well records, and track compliance with regulatory requirements and permit conditions.

Administrative orders (AOs) and/or legal actions will be initiated by state programs against owners and operators in significant violation of UIC regulatory requirements. This will include preparing public notification of violation and intent to issue AOs, and conducting public hearings.

The grant funds will also support technical assistance to operators, maintain well inventory data, and support regulatory changes to accommodate new EPA requirements and guidelines. The Agency will provide grants to Indian tribes working towards primacy, and will continue to implement the program on Indian lands and in non-primacy states. The Agency may use a portion of the grant funds for travel related to direct implementation activities.

1990 Program

In 1990, the Agency is allocating a total of $11,177,800 for this program, all of which is from the Abatement, Control and Compliance appropriation.

These funds support 35 full and five partial primacy programs to protect USDWs from contamination through underground injection. EPA uses grants to support direct implementation activities for 17 full non-primacy and five partial non-primacy states and Indian lands. A top priority for EPA and the states continues to be permitting of new Class II wells in order to expedite oil and gas production and repermitting of hazardous waste Class I wells. Under existing regulations such as the Agency's TCLP rule and newly issued guidance, EPA is increasing efforts to bring enforcement and/or regulatory action against Class IV and V wells which endanger USDWs serving public water supplies. A one million dollar set-aside is funding demonstration projects selected to provide information to support Class V regulatory and guidance development.

Grants also support surveillance and compliance activities. The programs primary means of surveillance is through field inspections and the review of reports submitted by operators. One important component is periodic testing of the mechanical integrity of injection wells to demonstrate the absence of contamination sources. Where violations are evident, appropriate enforcement actions are being initiated.

During 1990, Indian tribes that are eligible to assume primacy may apply for grants to establish a UIC program. Activities include conducting an inventory to determine the number and types of wells to be regulated and establishing the framework for the permitting and enforcement programs.

1989 Accomplishments

In 1989, the Agency obligated a total of $10,120,300 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Grants supported 35 full and five partial programs. EPA implemented 22 Federal programs supported in part by the grants. The states and EPA completed 8,977 permit determinations for new and existing wells and conducted evaluations to determine if permit requirements were being met. In addition, 37,475 mechanical integrity tests were conducted to ensure the integrity of wells. The states and EPA also focused on compliance activities through increased field inspections and enforcement actions. Other activities included the review of monitoring reports and maintenance of inventory data.

SPECIAL STUDIES AND DEMONSTRATIONS

1991 Program Request

The Agency requests a total of $1,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $3,374,100 from 1990. This decrease reflects the Agency's effort to achieve maximum leverage with limited resources and the expectation that the recipient organizations will secure additional funding through organizational dues, training fees and other mechanisms.

This program supports rural water training and technical assistance to rural water systems. Grassroots training and technical assistance will help owners and operators of rural water systems achieve and maintain compliance with the National Primary Drinking Water Regulations (NPDWRs) as mandated by the SDWA Amendments. To help ensure the delivery of clean, safe drinking water by rural water systems owner/operator training will address the operation and maintenance of small water systems, and wells, distribution and disinfection procedures, monitoring and reporting, record keeping, and water regulations. The goal is to promote system compliance with the NPDWRs by enhancing the system's physical infrastructure and ability to generate new revenue sources.

1990 Program

In 1990, the Agency is allocating a total of $4,374,100 for this program, all of which is from the Abatement, Control and Compliance appropriation.

EPA is funding 35 independent, non-profit state associations covering 36 states through an agreement with the National Rural Water Association (NRWA). These resources support technical assistance to rural water systems in such areas as operations, maintenance, capitalization and management to promote compliance with the NPDWRs. To be eligible for a grant, state Rural Water Associations must provide direct training and technical seminars to small systems owner/operators and provide certification training in cooperation with state primacy programs.

In 1990, EPA is also funding six independent rural community assistance programs through a grant to the NRCAP. Through site visits to rural communities, personnel from these organizations will determine technical assistance needs and develop appropriate educational programs to achieve the goal of improved compliance.

In addition to supporting the NRWA and NRCAP programs, EPA is funding a pilot program in which approximately ten states are being selected to develop Drinking Water Compliance Assurance Plans. These comprehensive plans will establish a framework in the state to maximize the effectiveness of all parties involved with public water supply by developing action-oriented partnerships, coordinating activities, and leveraging resources to promote public water system compliance. EPA is continuing funding of state training centers to provide drinking water technical assistance training and information directly to state personnel.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,000,000 for this program, all of which was from the Abatement, Control and Compliance appropriation.

The NRWA and its 35 state affiliates conducted a total of 542 technical assistance and training programs including: 301 technical seminars; 154 technical training sessions; 50 jointly sponsored specialized training sessions with other state and Federal agencies; and 37 problem solving sessions. In addition, NRWA affiliates provided a total of 13,346 hours of on-site technical assistance to address individual rural water system problems related to compliance, operations and maintenance, finance and management.

In 1989, EPA supported six RCAP organizations through a grant to the NRCAP. These organizations helped to improve the management capabilities and financial management of 60 small community drinking water systems in 13 states. RCAP projects included an assistance program to help small systems apply for loans and grants, a resource clearinghouse project to compile a manual of all available funds within a state and the development of training information and manuals for small water systems.

DRINKING WATER
Drinking Water Management

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)			
PROGRAM						
Public Water Systems Supervision Program Assistance						
Salaries & Expenses		$5,098.7	$5,847.6	$6,122.4	$8,065.0	$1,942.6
Abatement Control and Compliance		$5.0	$674.5	$665.9	$10.0	-$655.9
	TOTAL	$5,103.7	$6,522.1	$6,788.3	$8,075.0	$1,286.7
Underground Injection Control Program						
Salaries & Expenses		$5,482.9	$5,989.7	$5,957.1	$7,260.0	$1,302.9
	TOTAL	$5,482.9	$5,989.7	$5,957.1	$7,260.0	$1,302.9
TOTAL:						
Salaries & Expenses		$10,581.6	$11,837.3	$12,079.5	$15,325.0	$3,245.5
Abatement Control and Compliance		$5.0	$674.5	$665.9	$10.0	-$655.9
Drinking Water Management	TOTAL	$10,586.6	$12,511.8	$12,745.4	$15,335.0	$2,589.6
PERMANENT WORKYEARS						
Public Water Systems Supervision Program Assistance		108.3	135.3	126.3	161.3	35.0
Underground Injection Control Program		128.6	145.2	137.2	145.2	8.0
TOTAL PERMANENT WORKYEARS		236.9	280.5	263.5	306.5	43.0
TOTAL WORKYEARS						
Public Water Systems Supervision Program Assistance		117.7	135.3	134.8	161.3	26.5
Underground Injection Control Program		137.1	145.2	145.0	145.2	.2
TOTAL WORKYEARS		254.8	280.5	279.8	306.5	26.7

DRINKING WATER

Drinking Water Management

Budget Request

The Agency requests a total of $15,335,000 supported by 306.3 total workyears for 1991, an increase of $2,589,600 and 26.7 total workyears from 1990. Of the request, $15,325,000 will be for the Salaries and Expenses appropriation and $10,000 will be for the Abatement, Control and Compliance appropriation, an increase of $3,245,000 for the Salaries and Expenses appropriation and 26.7 total workyears and a decrease of $655,900 for the Abatement, Control and Compliance appropriation.

PUBLIC WATER SYSTEMS SUPERVISION PROGRAM ASSISTANCE

1991 Program Request

The Agency requests a total of $8,075,000 supported by 161.3 total workyears for this program, of which $8,065,000 will be for the Salaries and Expenses appropriation and $10,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,942,600 for Salaries and Expenses, a decrease of $655,900 for Abatement, Control and Compliance and an increase of 26.5 total workyears. The increase in Salaries and Expenses and total workyears will ensure the successful delegation of new regulatory requirements to the states. The decrease in Abatement, Control and Compliance reflects the completion of assistance to Camden, New Jersey and Crawford, Nebraska in response to contamination incidents.

The Regions will continue to supervise the states in implementing the greatly expanded new regulatory framework. In 1991, the states will begin adopting inorganic and synthetic organic contaminant standards. Meanwhile, Regional oversight of state activities will intensify as the program enters the effective period established for the lead/copper rules, filtration/disinfection requirements for surface water systems and revised microbiological contaminant standards. EPA Regions will increase their participation with state counterparts in implementing these high-impact rules, responding to unavoidable demands for EPA involvement and technical assistance on a case-by-case basis. The Regions will expand their laboratory certification program to encompass the full range of regulated and unregulated toxic chemicals, radionuclides, pesticides and microbiological parameters promulgated to date. Where Regions have direct implementation responsibility, including most Indian lands, they will also assume expanded duties.

Some states will experience difficulty in adopting the new provisions and in maintaining primacy of their drinking water programs. Special assistance efforts will be needed for these state programs to enhance implementation. For example, Regions will be prepared to provide state assignees or IPAs to states that need additional help in assimilating the new requirements. If some states give up primacy, the Regions will need to devote resources to direct implementation programs in those states.

Regions will institute new programs to reach and work with the vast numbers of small community and non-transient systems which exhibit the highest rates of noncompliance. Regions will engage not only state governments but also seek to reach local government and health officials to bring yet another influence to bear in promoting advances in drinking water protection. The Regions will implement training programs for trainers of state and local personnel, drinking water associations and drinking water system operators. The Regions will also begin to address the potential risks posed by private wells through this outreach and information transfer program, using the materials and training to inform owners of the risks of drinking water contamination and offer solutions to problems faced by well owners. Finally, the Regional data management responsibility will escalate as a result of increased systems compliance requirements which the states must report.

The Regions will continue to provide states with technical assistance to identify and remedy lead contaminated drinking water in schools, day care centers and non-residential buildings. Pollution prevention efforts will include outreach and training activities to ban lead content in plumbing supplies, to control corrosion, and educate the public on lead hazards in drinking water.

1990 Program

In 1990, the Agency is allocating a total of $6,788,300 supported by 134.8 total workyears for this program, of which $6,122,400 is from the Salaries and Expenses appropriation and $665,900 is from the Abatement, Control and Compliance appropriation.

The Regions seek to simultaneously implement a new, comprehensive level of drinking water protection while improving compliance with current standards and monitoring/reporting (M/R) requirements. To reach maximum voluntary compliance with requirements, EPA and the states are required to assume a new role of marketing program requirements. Traditional compliance programs will continue to reflect a balance of preventive technical assistance and enforcement deterrent. In addition, the Agency will mobilize the support of all parties with a stake in safe drinking water. To this end, the Regions are participating in initiatives to expand public education, support state efforts to build program capacity, and reach and enlist support of local health officials and groups with ties to "non-transient" systems. In addition, the Regions are promoting both institutional and technological innovations to deal with the most intractable compliance problems, which are among small systems.

State adoption of the legal and administrative authority to enforce a series of new regulations is essential to attaining health risk reduction for public water supplies. EPA Regions are working closely with the states in updating a variety of authorities and practices and providing continued oversight of adopted requirements including fluoride, volatile organic contaminants (VOCs), public notification requirements, and prohibitions of lead-content plumbing materials. States are in the process of adopting Maximum Contaminant Levels (MCLs) for microbiological contaminants and filtration and disinfection requirements for public water systems using surface water sources. As community and "non-transient" water systems take on an extensive monitoring program for both regulated and unregulated contaminants, the Regions are increasing their programs for expanded laboratory certification.

In response to drinking water contamination in Crawford, Nebraska, and Camden, New Jersey, the respective EPA Regions are providing oversight and technical assistance to clean up contaminated drinking water supplies. The Regions are reviewing the first applications by Indian tribal authorities for program primacy and program development grants. With the passage of the Lead Contamination Control Act, the Regions are providing technical support to states to test and remedy lead contaminated drinking water in schools.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,103,700 supported by 117.7 total workyears for this program of which $5,098,700 was from the Salaries and Expenses appropriation and $5,000 was from the Abatement, Control and Compliance appropriation.

During 1989, the Regions worked with states to begin adoption of the surface water treatment rule and revised MCLs for microbiological contaminants. Regions worked with primacy states to incorporate regulatory and monitoring requirements needed to enforce the revised MCLs for VOCs and public notification requirements. Efforts continued in overseeing the prohibition of lead-content plumbing materials and enforcing the fluoride treatment rule.

The program continued to track state compliance monitoring to locate and assist with problem systems and respond to contamination of supplies and waterborne disease outbreaks. The Regions assisted states in adopting new analytical techniques to meet additional laboratory certification requirements. The program continued to provide oversight of basic state program operations and conducted evaluations of state drinking water programs.

The Regions laid the basic groundwork for the process by which Indian tribes could apply for primacy. A procedural handbook was developed for Indian tribes interested in adopting a PWS primacy program. Significant assistance was given to the State of Indiana in moving towards primacy; a start-up grant was awarded to support primacy program development.

UNDERGROUND INJECTION CONTROL PROGRAM

1991 Program Request

The Agency requests a total of $7,260,000 supported by 145.2 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $1,302,900 and an increase of 0.2 in total workyears. The increase in Salaries and Expenses reflects increased personnel and support costs.

In 1991, EPA will continue to implement 22 Federal Underground Injection Control (UIC) programs (17 full and 5 partial) in states and on Indian lands which do not have primacy. Direct implementation activities will include making permit determinations and ensuring compliance with permit conditions and other regulatory requirements. A key objective continues to be more effective compliance and enforcement through greater emphasis on field inspections and surveillance.

In 1991, Regions will address Class V wells in accordance with the Shallow Injection Well Strategy. This comprehensive strategy provides a systematic approach for screening the diverse Class V universe and prescribing different levels of regulatory controls. Injection into certain high-risk wells will be banned as a result of revisions to the Hazardous Waste Toxic Characteristic Leaching Procedure (TCLP). The remaining well groups will be targeted for action based on the contamination risk posed by the wells. Information gained from the Class V demonstration projects will aide in determining whether guidance or regulatory revisions are the most effective method of control. Integration with other programs, such as Wellhead Protection, and the use of other authorities, e.g., the Resource Conservation and Recovery Act (RCRA), will maximize the total environmental benefit.

The Agency will complete its five-year schedule for permitting Class II wells within non-primacy jurisdictions. Regions will be implementing state-specific revisions to compliance evaluation programs; these changes, derived from the mid-course evaluation of Class II oil and gas wells, will impact such areas as the use of cement records as a valid structural integrity test, well construction practices, and the proper closure of abandoned wells. Other direct implementation activities will include management of contracts and grants, data management, and permit tracking.

EPA will be responsible for oversight of 35 full and 5 partial programs. EPA will provide technical assistance to primacy states and ensure that the programs continue to meet the minimum regulatory requirements. The Agency will continue to review state-issued permits to ensure that Federal and state requirements are met. In keeping with the Agency's pollution prevention initiative, the Regions will continue to review Class I hazardous and non-hazardous waste well permits. Other activities will include reviewing state noncompliance reports, compiling annual report data, preparing state-specific guidance documents and administering UIC state grants.

Regions will review applications from Indian tribes to determine their qualifications for treatment as a state and their primacy eligibility. For those Indian tribes applying for primacy, the Agency will provide guidance and grant assistance.

1990 Program

In 1990, the Agency is allocating a total of $5,957,100 supported by 145.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The Agency continues to implement Federal programs in 22 non-primacy states (17 full and 5 partial) and on Indian lands. This work includes making permit determinations and ensuring that well owners and operators adhere to permit conditions and other regulatory requirements. Regions are implementing ambient monitoring requirements for Class I injection wells, as required under the SDWA Amendments of 1986. Regions are providing assistance to Indian tribes working toward primacy.

EPA provides oversight and technical assistance to 35 full and 5 partial primacy state programs. EPA evaluates state efforts to implement their UIC programs and ensure that the minimum regulatory requirements are met. Regions continue to review Class I, II, III, or permitted Class V state-issued permits to ensure consistency with Federally-approved state programs; these reviews will help to ensure proper enforcement of permit conditions. Regions are also negotiating state grant workplans. Class V activities such as inspections and permitting are continued to reduce potential contamination of underground sources of drinking water.

During 1990, the Agency is completing its mid-course evaluation of the Class II regulatory provisions for mechanical integrity testing procedures, monitoring, reporting and permitting requirements. Regions are overseeing and implementing compliance review strategies to ensure that all permitted or rule-authorized Class I, II, III, or permitted Class V wells receive comprehensive technical/operational evaluations including field inspections on a regular basis. These compliance reviews replace the five-year cycle of file reviews. Regions continue to give permit determinations high priority. On-site inspections are being conducted to ensure compliance with permit conditions. Other activities include developing site-specific guidance, maintaining inventory data, and preparing annual reports.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,482,900 supported by 137.1 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

The Agency implemented Federal programs in 22 states and on Indian lands. Direct implementation activities focused on making permit determinations and ensuring adherence to permit conditions and other regulatory requirements. Regional activities in primacy states included general oversight and technical assistance through the issuance of guidance documents and on-site assistance. Through quarterly reporting data, the Regions reviewed state progress and took necessary actions to ensure proper enforcement.

Regional and state experience in regulating Class II oil and gas wells provided the basis for evaluation by EPA of key Class II wells control provisions. Regions reviewed and revised Class V well inventories and assisted the states in identifying and taking enforcement action against high risk Class V wells and banned Class IV wells. Regions provided assistance to Indian tribes working toward primacy as authorized by the SDWA Amendments.

DRINKING WATER
Ground-Water Protection

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Ground-Water Protection - FIFRA Fund						
Salaries & Expenses		$3,744.9	$4,342.0	$4,235.7	$5,233.4	$997.7
Abatement Control and Compliance		$3,906.7	$4,273.3	$4,212.7	$5,286.5	$1,073.8
	TOTAL	$7,651.6	$8,615.3	$8,448.4	$10,519.9	$2,071.5
TOTAL:						
Salaries & Expenses		$3,744.9	$4,342.0	$4,235.7	$5,233.4	$997.7
Abatement Control and Compliance		$3,906.7	$4,273.3	$4,212.7	$5,286.5	$1,073.8
Ground-Water Protection	TOTAL	$7,651.6	$8,615.3	$8,448.4	$10,519.9	$2,071.5
PERMANENT WORKYEARS						
Ground-Water Protection - FIFRA Fund		72.1	91.3	89.2	101.3	12.1
TOTAL PERMANENT WORKYEARS		72.1	91.3	89.2	101.3	12.1
TOTAL WORKYEARS						
Ground-Water Protection - FIFRA Fund		76.0	91.3	91.3	101.3	10.0
TOTAL WORKYEARS		76.0	91.3	91.3	101.3	10.0

DRINKING WATER

Ground-Water Protection

Budget Request

The Agency requests a total of $10,519,900 supported by 101.3 total workyears for 1991, an increase of $2,071,000 and 10.0 total workyears from 1990. Of the request, $5,233,400 will be for the Salaries and Expenses appropriation and $5,286,500 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $997,700 in the Salaries and Expenses appropriation and an increase of $1,074,000 in the Abatement, Control and Compliance appropriation. The total workyear increase represents an increase of 0.5 workyears from the Reregistration and Expedited Processing Revolving Fund and 9.5 workyears from the Salaries and Expenses appropriation.

GROUND-WATER PROTECTION

1991 Program Request

The Agency requests a total of $10,519,900 supported by 101.3 total workyears for this program, of which $5,233,400 will be for the Salaries and Expenses appropriation and $5,286,500 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $997,700 for Salaries and Expenses and $1,073,800 for Abatement, Control and Compliance, an increase of 9.5 total workyears from the Salaries and Expenses appropriation and a 0.5 increase in the Reregistration and Expedited Processing Revolving Fund. The increases in Salaries and Expenses and workyears as well as Abatement, Control and Compliance reflect the need for additional resources to assist states in their comprehensive ground-water protection program efforts.

For 1991, EPA will enhance assistance to states in developing and implementing ground-water protection activities that move the states beyond protection strategies to comprehensive ground-water protection programs. The Agency will assist states in such technical ground-water concerns as mapping of aquifer systems, conducting resource assessments, developing source control strategies, and determining vulnerability characteristics. EPA will also institute measures to foster institutional capacity building, such as coordination of state management and control activities with local governments to engender effective implementation of comprehensive ground-water protection programs. In addition, EPA will work with other Federal agencies to ensure consistency and integration in Federal ground-water policies, regulations and guidance.

In 1991, EPA will initiate analyses of major economic sectors in order to identify and assess high risk sources of ground-water contamination that are not currently regulated. Development and testing of best practices, e.g. siting criteria, technical controls and management practices, to prevent ground-water contamination from those unregulated sources found to be of greatest concern will receive Agency support and oversight. Priority for developing and testing best practices will focus on those contaminants frequently located in high risk areas, such as wellhead protection areas (WHPAs). Furthermore, EPA will provide information and technical expertise to states and will undertake communications efforts seeking adoption of best practices by institutions in each economic sector.

The Agency will continue to assist states in their development of wellhead protection (WHP) programs established in the 1986 Amendments to the Safe Drinking Water Act. This program, which addresses the prevention of contamination of ground-water serving as public water supplies, is an essential component of a state comprehensive ground-water protection program. In addition, EPA will enhance and expand its efforts in WHP demonstration projects which will concentrate on local issues related to the protection of wellhead areas.

During 1991, EPA will seek, test and refine additional environmental indicators for ground-water protection. Other new initiatives will include the establishment of an acquisition system, with the Office of Information Resources Management, to provide states with commonly requested data currently retained by other Federal agencies. EPA will update both a directory of ground-water information systems and a catalogue of data-bases related to ground-water protection. In addition to expanding its data collection efforts, the Agency will strengthen its capacity to disseminate and promote the exchange of information through the use of videos, pamphlets, workshops and conferences.

EPA will maintain its efforts in Sole Source Aquifer (SSA) designations. The Agency will also continue to review projects financially assisted by the Federal government on or near designated SSAs.

For activities related to the 1988 Federal Insecticide, Fungicide and Rodenticide Act amendments, additional workyears will support hydrogeological and related technical assistance in the pesticide registration process.

1990 Program

In 1990, the Agency is allocating a total of $8,448,400 supported by 91.3 workyears for this program, of which $4,235,700 is from the Salaries and Expenses appropriation and $4,212,700 is from the Abatement, Control and Compliance appropriation. Total workyears include 90.8 from the Salaries and Expenses appropriation and 0.5 from the Registration and Expedited Processing Revolving Fund.

EPA is supporting state efforts in developing comprehensive ground-water programs as a mechanism to provide the states with a framework to prioritize and integrate their efforts to manage and control actual and potential sources of contamination. Working with the Agency's pesticides program, the ground-water protection program is assisting state water agencies in developing hydrogeologic aspects of pesticides management plans which provide for protection methods tailored to area-specific differences in ground-water vulnerability. These pesticides management plans are an important aspect of a comprehensive approach to the state in managing their ground-water resources.

The Agency is promoting prevention of ground-water contamination by encouraging states to develop and implement wellhead protection (WHP) programs. Support of WHP programs is a central feature of EPA ground-water protection activities. EPA efforts to support WHP programs include assisting states in the delineation of wellhead protection areas (WHPAs) and enhancing state capacity to both address specific sources of contamination and develop appropriate risk management strategies. Furthermore, EPA is initiating a demonstration program with localities to encourage creative and unique approaches to information management in WHPAs. The Agency is also reviewing, approving, commenting on, and assisting states in revising WHP programs submitted during 1989.

The Agency is fully implementing efforts to ensure that EPA-related ground-water protection projects collect a minimum set of data elements. Other information management activities include the development of methods for translating new and historical ground-water data into an automated form and the continuation of enhancements to STORET and other EPA data-bases. The Agency is enhancing and promoting the use of geographic information systems, particularly in identifying the most critical sources of contamination in WHPAs, and is providing workshops and seminars for state and local officials on the use of these data management tools for ground-water protection.

EPA is responding to petitions for SSA designation and is reviewing Federal financially assisted projects on or near a designated SSA.

EPA is providing needed expertise and technical assistance in the pesticide registration process for new chemicals and/or new uses as mandated in the FIFRA Amendments of 1988.

1989 Accomplishments

In 1989, the Agency obligated a total of $7,651,600 supported by 76.0 total workyears for this program, of which $3,744,900 was from the Salaries and Expenses appropriation and $3,906,700 was from the Abatement, Control and Compliance appropriation.

During 1989, the Agency provide support for states activities in developing and adopting ground-water protection strategies. The Agency completed an assessment of ground-water protection activities carried out by the states and the extent of progress made nationally to achieve ground-water protection through state efforts. Findings were presented at an EPA/state forum addressing the states' capacity to undertake protection programs.

The Agency assisted states in the development of wellhead protection (WHP) programs which mitigate the effects of actual and potential sources of contamination of ground-water resources serving as public water supplies. Assistance to states included technical guidance on the delineation of wellhead protection areas (WHPAs), inventorying contamination sources, and providing technical information on methods for protecting public water wells from a wide variety of sources of contamination. In addition, the Agency received and initiated review and approval processes on some 30 WHP programs submitted by the states in accordance with the June 1989 statutory requirements.

In 1989, the Agency took a major step toward improving ground-water information by requiring that all programs conducted by EPA or on the Agency's behalf collect a minimum set of data elements when monitoring ground water.

The Agency designated additional SSAs in 1989. The number of designated aquifers increased to a total of 52 nationwide by the end of the year.

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DRINKING WATER
Drinking Water Enforcement

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Drinking Water Enforcement						
Salaries & Expenses		$3,411.0	$3,534.4	$3,817.6	$5,000.0	$1,182.4
	TOTAL	$3,411.0	$3,534.4	$3,817.6	$5,000.0	$1,182.4
TOTAL:						
Salaries & Expenses		$3,411.0	$3,534.4	$3,817.6	$5,000.0	$1,182.4
Drinking Water Enforcement	TOTAL	$3,411.0	$3,534.4	$3,817.6	$5,000.0	$1,182.4
PERMANENT WORKYEARS						
Drinking Water Enforcement		75.3	90.0	84.3	100.0	15.7
TOTAL PERMANENT WORKYEARS		75.3	90.0	84.3	100.0	15.7
TOTAL WORKYEARS						
Drinking Water Enforcement		81.0	90.0	90.0	100.0	10.0
TOTAL WORKYEARS		81.0	90.0	90.0	100.0	10.0

DRINKING WATER

Drinking Water Enforcement

Budget Request

The Agency requests a total of $5,000,000 supported by 100.0 total workyears for 1991, an increase of $1,182,400 and 10.0 workyears from 1990. All of the request will be for the Salaries and Expenses appropriation. This represents an increase of $1,182,400.

DRINKING WATER ENFORCEMENT

1991 Program Request

The Agency requests a total of $5,000,000 supported by 100.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $1,182,400 and 10.0 total workyears. These increases will bolster regional drinking water enforcement efforts to limit the increase of new violations from new chemical and microbiological regulatory requirements.

Effective enforcement will remain the linchpin of EPA's efforts to implement a new, comprehensive level of drinking water protection mandated by the Safe Drinking Water Act (SDWA). The presence of a credible enforcement deterrent will work to secure the utmost level of voluntary compliance among Public Water Systems (PWSs). In 1991, enforcement priorities will be transformed by the advent of new National Primary Drinking Water Regulations (NPDWR) for two "high risk" contaminants, namely pathogenic microorganisms and lead. While ultimately reducing substantial health risks, the immediate effect of the regulatory changes is likely to be large numbers of violations. A larger Federal enforcement presence in 1991, combined with vigorous EPA/state mobilization efforts to "market" the new requirements, will maximize voluntary compliance. At the same time, 1991 enforcement priorities will be affected by a growing number of serious violations of volatile organic contaminant standards and revised public notice requirements. For the former, 1991 is the deadline for 60,000 small community and non-transient systems to measure their initial compliance status.

In response to the rising tide of new kinds of violations, EPA will establish enforcement priorities on the basis of maximum health-risk payoff. In 1991, EPA will apply a new definition of Significant Non-Compliance (SNC) to assign enforcement priorities among the mix of new and existing standards. Based upon the risk-reduction principles reflected in the current SNC criteria, EPA's new priority scheme will expand enforcement priorities by more clearly defining categories less than "significant" but of serious concern. This gives the Regions and PWS primacy states more flexibility in defining priorities, and therefore enforcement programs can deal more effectively with the influx of new violations. Regions will continue to conduct Administrative Order (AO) hearings and assess penalties for AO noncompliance in conjunction with Regional Counsel.

In the area of Underground Injection Control (UIC) enforcement, EPA will continue to target Class IV and V injection practices identified as posing a substantial threat to underground sources of drinking water (USDW). Class IV wells that pose a threat to USDWs, particularly those which were reclassified according to the recent Toxic Characteristic Leaching Procedure (TCLP) amendments to the RCRA regulations, will be the UIC enforcement priority. In addition, Regional enforcement actions against Class I well operators (waste-disposal injections) will be initiated if they fail to apply for a permit, test for well mechanical integrity, or provide monitoring reports.

1990 Program

In 1990, the Agency is allocating a total of $3,817,600 supported by 90.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

In 1990, EPA is targeting the most serious NPDWR violators, initiating Federal action on all systems in SNC that the states have failed to either bring into compliance or to enforce themselves. As a follow up to the enforcement program reviews conducted in 1989, Headquarters is compiling a national report summarizing findings and recommending across-the-board changes in EPA's PWS enforcement efforts. Regions are instituting a regular process of consultation with all PWS primary states on enforcement activities and the need for Federal action. Regions are also working with all primacy states to institute risk-based enforcement strategies using escalating responses geared to the severity and recalcitrance of the non-compliance. EPA will institute and promote organizational reforms among states to increase the prominence of PWS efforts. EPA is also currently re-defining its definition of high-risk NPDWR violations, which in turn designates systems in SNC. The re-definition, a joint Headquarters-Regional effort, will take into account violations by non-transient PWSs. The comprehensive reviews of PWS enforcement have also highlighted opportunities for EPA to improve internal data management procedures for faster, more accurate tracking of priority non-compliance and EPA/state response. Headquarters is developing better guidance on reporting categories and revised verification procedures. Regions will, in turn, devote closer attention to state responses to non-compliance.

UIC enforcement focuses on injectors' regular testing for mechanical integrity and compliance with permit requirements for Class II, III and V wells. The monitoring of Class I disposal wells continues in order to ensure protection of USDWs. Enforcement actions against owners/operators in serious violation will help reduce some of the most substantial health threats to human health and the environment as well as set examples for other well operators to follow. Continued emphasis is on addressing and remedying Class IV and V injection practices identified as posing substantial threats to USDWs.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,411,000 supported by 81.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

Regions continued to issue AOs against violators of PWS and UIC program requirements in order to achieve compliance with regulations and standards set by the Agency. Significant non-compilers remained the enforcement priority although other violators were pursued. Where state action failed to remedy a violation, EPA issued AOs or initiated court action. EPA implemented the new AO compliance tracking system designed to provide information on the status of AOs and the actions taken to return violators to compliance. The Regions assisted Regional Counsels in documenting violations which required new and more stringent enforcement actions and participated in activities related to civil enforcement referral to the Department of Justice.

Less than two percent of community water systems were in SNC with microbiological or turbidity MCLs and/or monitoring and reporting (M/R) requirements and/or total trihalomethane M/R requirements. Approximately 18 percent of community water systems reported some violations with nearly 78 percent of those being M/R violations. The remaining 78 percent of community water systems were in full compliance.

The Regions issued 122 final AOs for UIC violations and 242 enforcement actions against PWS violators.

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HAZARDOUS WASTE

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
APPROPRIATION					
Salaries & Expenses	$74,619.6	$79,193.2	$78,044.1	$96,203.4	$18,159.3
Abatement Control and Compliance	$159,121.0	$163,389.8	$160,938.2	$194,599.5	$33,661.3
Research & Development	$28,897.8	$31,204.5	$30,313.7	$26,341.2	-$3,972.5
TOTAL, Hazardous Waste	$262,638.4	$273,787.5	$269,296.0	$317,144.1	$47,848.1
PERMANENT WORKYEARS	1,372.2	1,523.0	1,432.9	1,634.7	201.8
TOTAL WORKYEARS	1,452.3	1,523.0	1,490.1	1,634.7	144.6
OUTLAYS	$253,744.5	$264,578.8	$263,380.1	$307,477.6	$44,097.5
AUTHORIZATION LEVELS	The Solid Waste Disposal Act as amended expired on November 8, 1988. Reauthorization is pending.				

HAZARDOUS WASTE

OVERVIEW AND STRATEGY

The Resource Conservation and Recovery Act (RCRA) of 1976, as revised by the Hazardous and Solid Waste Amendments (HSWA) of 1984, provides the legislative mandate for a nationwide program to protect human health and the environment from the risks of improper management of hazardous and solid wastes. The goals of the Act are: to ensure adequate and safe treatment of hazardous waste through its management from generation through disposal; to ensure adequate and safe management and disposal capacity for solid wastes; and to prevent and detect leakage from underground storage tanks (USTs).

The Emergency Planning and Community Right-to-Know Act, Title III of the Superfund Amendments and Reauthorization Act of 1986, establishes a framework for identification of hazardous chemicals present in communities. This program provides for development of state and local response plans to prevent, protect and inform the public in the event of a chemical release emergency.

The demands on and expectations for EPA's waste management programs continue to rise. During the early 1970's, program direction emphasized identifying and controlling solid waste. The late 1970's and 1980's saw the refinement and expansion of this direction to include "cradle to grave" management of hazardous wastes and states' implementation of Federally-authorized national management standards. In the 1990's, the Agency must increasingly address problems associated with the expanding universes of wastes produced by a growing national economy, including municipal solid waste, medical waste, special large-volume wastes and industrial solid waste. EPA must also continue its work to complete the remaining protective mandates of HSWA hazardous waste requirements, many of which may be subject to new deadlines as a result of citizen suits brought in Federal court.

The Agency's strategy to address these demands and expectations is to: (1) strengthen state relationships by leveraging permitting and enforcement resources to improve hazardous waste program implementation; (2) develop new, and revise existing regulations to address continually evolving program directions; and (3) conduct research, encourage technology development and transfer, and establish outreach programs to provide the scientific program foundation, national information network and public communications capability necessary to successfully conduct a national waste management program.

Leveraging a National Regulatory Program Through the States

The Agency recognizes the essential role of the states in developing, implementing and enforcing a national waste management program, and is providing significant increases in resources to assist the states in fulfilling their growing responsibilities. Success in managing the expanding universe of hazardous, solid, municipal, medical and special wastes depends on a strong Federal/state partnership. The Agency and the states will jointly examine existing state authorities to determine changes necessary to meet national hazardous waste program requirements. EPA Regions will assist the states in upgrading their program capabilities to meet new and modified Federal standards. The States will continue to develop legislation and regulations to incorporate HSWA provisions and new and revised requirements into their programs.

The permitting program is the backbone of the national hazardous waste management system, upon which depends our ultimate success in achieving the legislative direction envisioned in HSWA -- the protection of our health and environment from the risks of ill-managed wastes. The permitting program will respond to the statutory mandate to issue permits to all operating and closing hazardous waste management facilities. The Agency will increase state resources to make significant progress toward meeting the 1992 storage and treatment facility permitting deadline and will process post-closure permits for land disposal facilities. The Agency and states will continue to modify permits as necessary to address changing regulations, new corrective action provisions, and changes to facility design and practices.

The Agency's concentration on meeting the mandated permitting deadlines and EPA's recent use of corrective action order authorities, have created a rapidly expanding universe of facilities where corrective action requirements have been imposed. The Agency will encourage the states, through HSWA authorization and increased resources targeted in cooperative agreements, to assume the lead for approximately fifty percent of corrective action oversight. EPA will continue to oversee owner/operators' corrective action activities and will tailor its facility oversight to ensure effective owner/operator response. Community outreach activities will maintain continued, informed public involvement in the process of correcting problems at our Nation's hazardous waste facilities.

In 1990 the states assumed the lead in many mandated inspection and enforcement activities -- conducting inspections of Federal and local facilities and follow-up enforcement, which better balanced the state/EPA workload. As new wastes are brought into the regulatory universe -- mixed waste, mining waste, hazardous waste fuel rule, organic toxicity characteristic -- a higher level of state inspection and enforcement activity will be necessary to ensure continued industry compliance. The Agency is increasing state resources for this higher level of state enforcement activity.

Emphasis on non-hazardous waste management activities will continue as Regions and states work to implement revised municipal waste management criteria, and to support the increased national attention to municipal waste recycling and source reduction. The Regions will provide project-specific financial assistance to develop a strong and consistent national effort to attain municipal waste management and reduction goals established in the Agency's Agenda for Action.

In the UST program, the Agency and states will identify and develop common solutions to program implementation problems, which can be applied to improve performance in many state programs. The Agency will develop and test processes for states' use in promoting compliance with and enforcing new UST leak detection, corrective action and financial responsibility requirements. The Agency will ensure that states incorporate these new requirements and will increase prevention program financial assistance.

As the states and local communities move from developing to implementing emergency response plans under the Title III program, the Agency will assist states in developing their capability to enforce the emergency planning and chemical storage and release notification requirements. National guidance, technical assistance and training will highlight enforcement targeting mechanisms and development of the case referral process through state legal systems.

Sustaining a Responsive National Regulatory Program

The hazardous waste regulatory program must continue its work to complete the remaining requirements mandated in HSWA, responding to existing statutory and new court-ordered deadlines. The national program must also respond to the concerns of an increasingly aware and informed public, which expects Agency action on a growing universe of waste management facilities in such diverse areas as municipal solid waste, medical waste and special large volume wastes.

Implementing the legislative intent to identify and bring under management those wastes considered hazardous, the Agency will perform preliminary listing studies and develop regulations to list as hazardous the specific wastes named in HSWA. Also, the Agency will develop the double liner and the hazardous waste leak detection rules to address concerns over the ability of hazardous waste facilities to safely and effectively manage the Nation's hazardous waste. In this regard, Headquarters will prepare technical updates for minimum technology requirements. The Agency will begin development of treatment standards for those wastes listed as hazardous since the enactment of HSWA. The Agency will implement the land disposal restrictions program by processing treatment capacity and no migration petitions. These regulatory efforts will substantially address major HSWA protective mandates to study, identify, list, restrict disposal and manage certain wastes as hazardous.

The Agency will proceed with its efforts to address emerging solid waste management issues of national concern by serving as a technical clearinghouse for municipal solid waste management information, options and guidelines. The Agency will continue to address municipal solid waste source reduction and recycling programs recommended in the Agenda for Action on solid waste. These efforts will include establishing volume and toxicity reduction goals as well as encouraging the initiation of source reduction and recycling programs to meet various state and local needs. Finally, the Agency will expand its municipal solid waste program to address methods for safely and effectively managing municipal waste combustion ash.

The Agency will respond to management concerns in its special waste program by promulgating rules for oil and gas waste and mining waste and will issue a regulatory determination on exempt mineral processing wastes. The Agency will implement the medical waste rule and will complete a required report to Congress on the medical waste demonstration program. Also, the Agency will issue mixed wastes guidance and rules, and conduct a regulatory determination on cement kiln dust. In the international arena, the Agency will review its hazardous waste export program rules to ensure proper disposition of hazardous waste abroad.

Prevention of pollution and minimization of hazardous and solid waste is a national priority into the 1990's. The Agency will promote pollution prevention through specific initiatives, such as encouraging the use of re-mining techniques at abandoned or inactive mine tailing sites. Significant Agency efforts will be devoted to enhancing outreach and education programs for encouraging industrial source reduction and market-based recycling. Headquarters will reexamine its policies, guidances and regulations and will promote pollution prevention in its permit activities. The UST program will continue its mission to prevent pollution of surface and groundwater due to the leaking of underground storage tanks.

Supporting the Regulatory Program Through Research, Technology Transfer and Public Participation

The research program provides the scientific and technical information and data necessary to support the development of hazardous waste regulations and implementation. Scientific information on the prevention, health risk, monitoring and environmental processes associated with hazardous waste, from generation to disposal, is provided to state and local government, private industry and other decision-makers.

The Agency will conduct research in several areas: alternate technologies, waste characterization and identification, land disposal, incineration, quality assurance, releases, and municipal solid waste. The Agency will provide technology transfer of its research findings to encourage implementation of improved methods and practices. Additional research will be conducted on municipal solid waste, specifically in the area of source reduction. Municipal Solid Waste Research includes the MITE (Municipal Innovative Technology Evaluation) program, which provides demonstration and evaluation of new technologies.

Increased resources will be provided for on-line activation of the RCRA Information System in a number of pilot states. This system will enable the Agency, Regions and the states to better monitor facility progress and identify national, Regional or state trends in hazardous waste management. This improved data collection system will provide the national basis for evaluation of the effectiveness of waste management regulations and development of regulatory improvements.

Utilizing the Private Sector for Essential Consulting Services

The Agency requires private consultants to perform essential support services for which it either does not or is not economically effective to possess the expert, specialized personnel resources, or which are time-critical. The Agency will utilize the expert advisory, research, analytical and assistance services of consultants for development of regulatory impact analyses, for other specialized technical support in developing highly complex regulations, national guidance documents, for functionally specialized technical assistance required for program implementation, and for the development of comprehensive information management systems.

HAZARDOUS WASTE

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE (+) DECREASE (-) 1991 VS 1990
Regulations				
RCRA Standards	25	43	26	-17
Effl. Gdlns. Data Summary	*	15	3	-12
Proposals	14	26	16	-10
Promulgations	11	17	10	-7
UIC Petition Reviews	40	35	40	+5
Implementation				
Guidance Documents	25	15	11	-4
Reports to Congress	3	5	3	-2
State Authorization (cum.)				
Base Program	45	48	52	+4
HSWA Cluster I	4	34	45	+11
Final Permit Determinations and Closures (Cumulative)	2,251	2,647	2,797	+150
Ongoing Permit Processing	355	361	1,005	+644
UIC Permit Revisions	75	75	75	0
Enforcement and Corrective Actions				
Inspections	13,182	12,870	13,382	+512
Administrative Orders	1,227	1,291	1,291	0
Civil Litigation	187	156	156	0
Criminal Litigation	103	104	132	+28
Corrective Action Facility Assessments	174	107	107	0
Monitoring of Corrective Action Activities	121	280	402	+122
POTW Corrective Measures	6	6	6	0

* Outputs for the Office of Water's Hazardous Waste regulatory development activities are not available for 1989.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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HAZARDOUS WASTE
Hazardous Waste Research

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Scientific Assessment - Hazardous Waste						
Salaries & Expenses		$1,124.4	$1,069.6	$1,040.9	$1,222.1	$181.2
Research & Development		$2,235.9	$1,659.7	$1,604.2	$1,648.0	$43.8
	TOTAL	$3,360.3	$2,729.3	$2,645.1	$2,870.1	$225.0
Monitoring Systems & Quality Assurance - Hazardous Waste						
Salaries & Expenses		$3,983.1	$3,301.7	$3,257.2	$3,503.6	$246.4
Research & Development		$8,044.1	$8,478.0	$8,250.5	$6,784.2	-$1,466.3
	TOTAL	$12,027.2	$11,779.7	$11,507.7	$10,287.8	-$1,219.9
Health Effects - Hazardous Waste						
Salaries & Expenses		$660.3	$667.6	$641.6	$960.9	$319.3
Research & Development		$474.8	$837.0	$807.4	$829.5	$22.1
	TOTAL	$1,135.1	$1,504.6	$1,449.0	$1,790.4	$341.4
Environmental Engineering & Technology - Hazardous Waste						
Salaries & Expenses		$5,366.5	$5,315.2	$5,179.9	$5,570.3	$390.4
Research & Development		$11,222.7	$14,092.8	$13,639.5	$12,426.4	-$1,213.1
	TOTAL	$16,589.2	$19,408.0	$18,819.4	$17,996.7	-$822.7
Environmental Processes & Effects - Hazardous Waste						
Salaries & Expenses		$3,453.0	$3,366.5	$3,305.0	$3,569.4	$264.4
Research & Development		$4,420.3	$3,675.7	$3,577.0	$3,653.1	$76.1
	TOTAL	$7,873.3	$7,042.2	$6,882.0	$7,222.5	$340.5
Technical Information and Liaison - Hazardous Waste						
Research & Development					$1,000.0	$1,000.0
	TOTAL				$1,000.0	$1,000.0
Integrated Hazardous Waste Research						
Research & Development		$2,500.0	$2,461.3	$2,435.1		-$2,435.1
	TOTAL	$2,500.0	$2,461.3	$2,435.1		-$2,435.1
TOTAL:						
Salaries & Expenses		$14,587.3	$13,720.6	$13,424.6	$14,826.3	$1,401.7
Research & Development		$28,897.8	$31,204.5	$30,313.7	$26,341.2	-$3,972.5
Hazardous Waste Research	TOTAL	$43,485.1	$44,925.1	$43,738.3	$41,167.5	-$2,570.8

HAZARDOUS WASTE
Hazardous Waste Research

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PERMANENT WORKYEARS					
Scientific Assessment - Hazardous Waste	12.6	17.4	17.1	17.1	0.0
Monitoring Systems & Quality Assurance - Hazardous Waste	48.7	47.5	47.5	47.5	0.0
Health Effects - Hazardous Waste	11.3	12.0	11.6	11.6	0.0
Environmental Engineering & Technology - Hazardous Waste	87.9	89.8	83.7	84.9	1.2
Environmental Processes & Effects - Hazardous Waste	51.5	52.0	51.7	50.0	-1.7
TOTAL PERMANENT WORKYEARS	212.0	218.7	211.6	211.1	-.5
TOTAL WORKYEARS					
Scientific Assessment - Hazardous Waste	14.8	17.4	17.1	17.1	0.0
Monitoring Systems & Quality Assurance - Hazardous Waste	52.4	47.5	47.5	47.5	0.0
Health Effects - Hazardous Waste	11.8	12.0	11.6	11.6	0.0
Environmental Engineering & Technology - Hazardous Waste	93.0	89.8	83.7	84.9	1.2
Environmental Processes & Effects - Hazardous Waste	53.3	52.0	51.7	50.0	-1.7
TOTAL WORKYEARS	225.3	218.7	211.6	211.1	-.5

HAZARDOUS WASTE

Hazardous Waste Research

Principal Outputs by Objective

Objective 1: Develop Data to Support the Use of Alternate Technologies

1991: o Pollution Prevention Case Studies (Engineering)

o Technical Report on Clean Products Studies and Demonstrations (Engineering)

1990: o Waste Minimization Guidance Manuals for Seven Industries (Engineering)

o Technical Report on the Summary of Waste Minimization Evaluations supported by the USEPA (Engineering)

o Report to Congress on Pollution Prevention Research (Engineering)

1989: o Technical Resource Document on the Minimization and Control of Hazardous Waste Combustion By-Products (Engineering)

Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments

1991: o 50-60 Health and Environmental Effect Documents (Sci. Assessment)

o Approximately 30 Subchronic Testing Protocols for RCRA Chemicals (Sci. Assessment)

o Technical Support Documents for 20-30 RCRA Site-Specific Assessments - e.g., Petitions, ACLs, etc. (Sci. Assessment)

o User's Manual for Two-Dimensional Multiphase Transport Model (Environ. Processes)

o Report on Nitrate Subsurface Contamination Studies (Environ. Processes)

o Report on Methods for Handling Spatial Variability to Subsurface Environments (Environ. Processes)

1990: o Report on Field Evaluation of Unsaturated Zone Model (Environ. Processes)

o Report on Site Specific Multimedia Modeling for Ranking Closure Options at RCRA Land Disposal Operations (Environ. Processes)

o Report on Evaluation of Selected Plants as Cover Crops for HW/SF Sites (Environ. Processes)

- o Beta Test Model of Risk Assistant Expert System (Sci. Assessment)
- o Carcinogenicity Profiles for Third Portion of Land Disposal Ban (Sci. Assessment)
- o 50-60 Health and Environmental Effect Documents (Sci. Assessment)
- o Approximately 30 Subchronic Testing Protocols for RCRA Chemicals (Sci. Assessment)
- o Technical Support Documents for 20-30 RCRA Site-Specific Assessments - e.g., Petitions, ACLs, etc. (Sci. Assessment)

1989:

- o Exposure Factors Handbook (Sci. Assessment)
- o 50-60 Health and Environmental Effect Documents (Sci. Assessment)
- o Approximately 30 Subchronic Testing Protocols for RCRA Chemicals (Sci. Assessment)
- o Technical Support Documents for 20-30 RCRA Site-Specific Assessments - e.g., Petitions, ACLs, etc. (Sci. Assessment)
- o Report on Quantification of Prediction Uncertainty Associated with Surface Water Quality Models (Sci. Assessment)
- o Test and Update PC Module for Cure Data Base (Sci. Assessment)
- o Prototype of Risk Assistant Expert System for Exposure/Risk Assessment at Specific Sites (Jointly Funded, Hazardous Waste and Superfund) (Sci. Assessment)
- o Report on Evaluation of Source Term Initial Conditions for Modeling Leachate Migration from Landfills (Environ. Processes)
- o Report on Reliability of Ground-Water Solute Transport Models and Application of Stochastic Theories to Predict Dispersion (Environ. Processes)
- o Report on Treatability Potential for EPA Listed Hazardous Wastes in Soils (Environ. Processes)

Objective 3: Conduct Assessment and Control Research to Control Dioxin

1990:

- o Report: Kinetics and Toxicity Studies in Monkeys Exposed to TCDD (Sci. Assessment)

1989:

- o Reports on Soil Ingestion Study, and Estimation of Soil Ingestion in Children and Adults (Scientific Assessment)
- o Report on Plant Uptake of Dioxin (Envir. Processes)
- o Photodegradation Evaluation of Dioxin in Soils (Envir. Processes)

Objective 4: Develop Procedures to Identify and Measure Chemicals in Wastes

1991: o Application of Borehole Geophysics in Waste Site Monitoring (Monitoring)

1990: o Report on Research Statistics, Geostatistics, and Chemometrics (Monitoring)

1989: o Development of Automated Expert Systems for Determining Location Standards for Subtitle-D Facilities in Wet Environments (Monitor.)

Objective 5: Develop Data to Support Implementation of the Land Disposal Regulations

1990: o Guidance Documents on the Design and Operation of Landfills and Surface Impoundments (Engineering)

Objective 6: Develop Data to Support Implementation of the Incineration Regulations

1991: o Report on Pilot-Scale Testing done at the IRF (Engineering)

1990: o Reports on OSW Methodology for Multi-Media Risk Assessment for Municipal Waste Combustors (Sci. Assessment)

o Document Evaluating the Mutagenicity of Particle Bound Organics found in Incinerator Emissions (Health)

o Technical Resource Document on Minimization and Control of Hazardous Waste Combustion By-Products (Engineering)

o Report on EPA/Environment Canada; RDF Combustion Technology, Environmental Characterization Mid-Connecticut Resource Recovery Facility (Engineering)

1989: o Report on Phase I of Site-Specific Risk Assessment at Rutland, VT (Sci. Assessment)

o Engineering Assessment Report on Hazardous Waste Co-Firing in Industrial Boilers under Nonsteady Operating Conditions (Engineering)

o Municipal Waste Combustion Assessment (Engineering)

Objective 7: Provide Quality Assurance Support to the Hazardous Waste Program

1991: o Comprehensive Soil Sample Preparation Manual for Volatile Organics (Monitoring)

- o Annual Report on Quality Control Samples for RCRA Appendix VIII Chemicals (monitoring)

1990: o Summary Report on Quality Assurance Support Including Development of Quality Assurance Materials for Unconventional Matrices (Monitoring)

- o Annual Report on Quality Control Samples for RCRA Appendix VIII Chemicals (Monitoring)

1989: o Annual Report on Quality Control Samples for RCRA Appendix VIII Chemicals (Monitoring)

Objective 8: Develop Procedures to Prevent and Contain Hazardous Releases

1991: o Final Report on Evaluation of Volumetric Leak Detection for Chemical USTs (Engineering)

- o Final Report on Internal Inspection Protocol and Validation (Engineering)

1990: o Guide for Field Screening of Underground Storage Tanks (Monitoring)

- o Report the State of the Art on Internal Tank Inspection Equipment and Procedures (Engineering)
- o Report on Processes Affecting Aquifer Remediation by Pumping (Environ. Processes)

1989: o Protocol for Evaluating Pipeline Leak Detection Systems (Engineering)

- o Report on In-Situ Bioremediation of Spills from Underground Storage Tanks (Environ. Processes)

Objective 9: Conduct Research on Municipal Solid Waste

1991: o Site-Specific Risk Assessments for Municipal Waste Combustors (Sci. Assessment)

- o Strategy Document for Research on Pharmokinetic Principles for Solid Wastes (Health)

1990: o Program existed but outputs were described in other Hazardous Waste Research media objection

1989: o Program existed but outputs were described in other Hazardous Waste Research media objection

HAZARDOUS WASTE

Hazardous Waste Research

Budget Request

The Agency requests a total of $41,167,500 supported by 211.1 total workyears for 1991, a decrease of $2,570,800 and a decrease of 0.5 total workyears from 1990. Of the request, $14,826,300 will be for the Salaries and Expenses appropriation and $26,341,200 will be for the Research and Development appropriation. There is an increase of $1,401,700 in Salaries & Expenses and a decrease of $3,972,500 in Research & Development.

Program Objectives

The Resource Conservation and Recovery Act (RCRA) authorizes a regulatory program to identify and manage wastes which pose a substantial hazard to human health or the environment. RCRA also requires the promulgation of standards related to Underground Storage Tank systems for both chemicals and petroleum products. Section 311 of the Clean Water Act also mandates some of the research conducted under this program, specifically the hazardous material release efforts.

Objective 1: Develop Data to Support the Use of Alternative Technologies. Research supporting implemention of RCRA provisions that require the banning of highly hazardous wastes from land disposal. The effectiveness of treatment alternatives and waste altering processes is being evaluated and performance parameters established. Development of technologies to minimize waste is a component of this objective.

Objective 2: Develop and Evaluate Tests and Procedures for Conducting Risk Assessments. Research provides more applicable, less expensive, simpler, and more accurate risk assessment methodologies, as well as actual risk assessments for decision making.

Objective 3: Conduct Assessment and Control Research to Address Dioxin. Research evaluated the potential for human health effects from dioxin in the environment.

Objective 4: Develop Procedures to Characterize Chemicals in Wastes. Research develops and validates the analytical procedures and techniques required to characterize wastes for Sections 3001 and 3013 of RCRA. These are used for listing and other regulatory decisions made by the Office of Solid Waste.

Objective 5: Develop Data to Support the Land Disposal Regulations. Research supports permitting of land disposal and land treatment facilities, and for improvements in operation and design requirements.

Objective 6: Develop Data to Support the Incineration Regulations. Laboratory, pilot and full-scale incineration units are being investigated to determine the performance of, and health effects associated with, a range of thermal treatment devices. Results are used by permitting officials to evaluate permit requests and to monitor compliance with performance requirements. Evaluations of municipal waste combustion processes are conducted.

Objective 7: Provide Quality Assurance Support. A quality assurance program is being conducted to provide a scientific data base of known quality to support RCRA regulatory activities. The program includes a repository of calibration standards, reference materials, and on-site evaluations of contractor laboratories.

Objective 8: Develop Procedures to Prevent and Contain Hazardous Releases. Research addresses requirements established by Section 311 of the Clean Water Act (CWA) and RCRA's Underground Storage Tank (UST) program. Research supporting these programs assesses the most cost-effective technology and scientific techniques available to prevent and control releases of hazardous substances.

Objective 9: Conduct Research on Municipal Solid Waste. The Municipal Innovative Technology Evaluation (MITE) program evaluates new technologies to treat and minimize the volume and effects of municipal solid waste. Municipal waste combustion processes are evaluated. Health risk from combustion emissions and residues are investigated. An expert system is being assembled for use in evaluating Subtitle-D facility locations.

Objective 10: Technical Information and Liaison. Technological findings are transferred to State and local governments and private industry.

Objective 11: Conduct Research for Emergency Planning and Community Right-to-Know. Research will support the implementation of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) on Community Planning and Emergency Right-to-Know. Efforts will focus on development of process measurement and monitoring techniques for prevention of accidental and chronic releases in an effort to help state and local governments, planning authorities, industry and private citizens assess and respond to risks posed by hazardous substance releases.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $2,870,100 supported by 17.1 total workyears for this program, of which $1,222,100 will be for the Salaries and Expenses appropriation and $1,648,000 will be for the Research and Development appropriation. This represents an increase from 1990 of $181,200 for the Salaries and Expenses appropriation due to increased personnel and support costs. The increase from 1990 in the Research and Development appropriation is $43,800.

Develop and Evaluate Tests and Procedures for Conducting Risk Assessments. Health and environmental effects documents, reference doses, carcinogenicity profiles and technical evaluations will be provided to support the RCRA listing, permitting and land disposal restriction programs. Work will continue on improving microcomputer assisted risk assessment tools.

Conduct Research on Municipal Solid Waste. Risk assessment on specific waste combustors will be conducted, using the methodology developed in 1990. A report on the comparative risk assessment of municipal waste combustors as compared to other waste treatment technologies will be completed.

1990 Program

In 1990, the Agency is allocating a total of $2,645,100 supported by 17.1 total workyears for this program, of which $1,040,900 is from the Salaries and Expenses appropriation and $1,604,200 is from the Research and Development appropriation.

In 1990, the program is emphasizing the development and evaluation of tests and procedures for conducting risk assessments. Health and Environmental Effects Documents, Reference Doses, and technical evaluations are provided to support the RCRA listing, permitting and land disposal restriction programs. Microcomputer-assisted risk assessment tools are being further developed.

To support the incineration regulations, a comprehensive risk assessment methodology is being provided to the Office of Solid Waste for a multi-media assessment of risks from municipal waste combustion.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,360,300 supported by 14.8 total workyears for this program, of which $1,124,400 was from the Salaries and Expenses appropriation and $2,235,900 was from the Research and Development appropriation.

The 1989 program emphasized the production of health and environmental effects documents for the listing/delisting programs, and Reference Doses for the land disposal restriction program. Work was completed on the determination of patterns of soil ingestion by children for use in exposure assessments. The exposure work was completed for risk assessments of burning contaminated soils in mobile incinerators. Phase I of the site-specific risk assessment at Rutland, Vt., the model municipal waste combustor, was completed.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $10,287,800 supported by 47.5 total workyears for this program, of which $3,503,600 will be for the Salaries and Expenses appropriation and $6,784,200 will be for the Research and Development appropriation. This represents an increase from 1990 of $246,400 for the Salaries and Expense appropriation for increased personnel and support costs, with no change in total workyears. The decrease from 1990 of $1,466,300 for the Research and Development appropriation reflects, in part, a shifting of resources for the technology transfer portion of waste identification into the Technical Information and Liaison program element where it more appropriately belongs. Methods work on SW846 has been curtailed and resources for this effort are realigned to other higher Agency priorities. To fund other Agency priorities, reductions in the Research and Development appropriation were also taken from quality assurance support and methods development to monitor underground storage tank releases.

Develop Procedures to Characterize Chemicals in Wastes. Methods will be developed to detect highly toxic wastes in soils and sediments and for detecting organics in the ambient air, near and at waste treatment disposal facilities. Validation and improvement of the methods contained in the Compendium of Analytical Methods to Monitor for Solid Waste (SW-846) continues. These methods are used to determine the composition of wastes, detect trace levels of toxic constituents, and rapidly screen for hazardous constituents. Automated methods for subsurface monitoring will be evaluated for their ability to detect and track waste plume migration toward and into ground water. Remote sensing will be conducted to assist permit writers in verifying the contents of permit applications and to assist enforcement in assessing compliance.

Provide Quality Assurance Support. Quality assurance research will focus on improving quality control sample matrices and expanding the universe of materials for which quality control samples are available. Work on the quality control sampling program which ensured accuracy of data will be privatized or reduced.

Develop Procedures to Prevent and Contain Hazardous Releases. Remote sensing support is provided to the Regions for monitoring spills and spill threats under emergency conditions in support of Section 311 of the Clean Water Act. In addition, in support of leak prevention and corrective action, leak monitoring methods applicable to underground storage tanks are under evaluation. This activity includes evaluation of leak monitoring methods to establish which existing instrumentation meet established performance criteria.

Conduct Research on Municipal Solid Waste. An expert system will be assembled for use in evaluating Subtitle-D facility locations in wet environments.

Conduct Research for Emergency Planning and Community Right-to-Know. A research plan will be developed on modeling and monitoring of hazardous chemical releases.

1990 Program

In 1990, the Agency is allocating a total of $11,507,700 supported by 47.5 total workyears for this program, of which $3,257,200 is from the Salaries and Expenses appropriation and $8,250,500 is from the Research and Development appropriation.

Methods for characterizing and detecting wastes and providing criteria for determining if those wastes constitute a potential hazard are being developed. Methods are tested for application to highly toxic wastes in soils and sediments and for detection of organics in the ambient air near and at waste treatment disposal facilities. An effort to validate and improve the methods contained in the Compendium of Analytical Methods to Monitor for Solid Waste (SW-846) is underway. Automated methods for subsurface monitoring are being developed and evaluated for their ability to detect and track waste plume migration toward and into ground water. Remote sensing is conducted to assist permit writers. Technical information is disseminated to State and local Governments.

To ensure that the data on which regulations and enforcement actions are based are accurate, quality control samples and reference materials of wastes are provided to EPA contractors, State, and local laboratories. This will promote standardized monitoring methods, and quality control using RCRA analytical techniques.

Remote sensing support is provided to the Regions for monitoring spills and spill threats. In support of leak prevention and corrective action, leak monitoring methods applicable to underground storage tanks are under evaluation.

1989 Accomplishments

In 1989, the Agency obligated a total of $12,027,200 supported by 52.4 total workyears for this program, of which $3,983,100 was from the Salaries and Expenses appropriation and $8,044,100 was from the Research and Development appropriation.

During 1989, research was conducted to support RCRA requirements to determine waste composition, to detect levels of toxic constituents in ground water/air, and to characterize hazardous constituents through the evaluation, validation, development and improvement of methods for SW-846. Monitoring methods were evaluated and/or developed for use at Subtitle-D landfills. Remote sensing was provided to assist in the assessment and mitigation of spills from facilities engaged in production, storage, processing, and distribution of hazardous materials. Performance criteria for evaluating leak monitoring methods were established and available techniques for conducting external leak monitoring from underground storage tanks were evaluated and developed.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $1,790,400 supported by 11.6 total workyears for this program, of which $960,900 will be for the Salaries and Expenses appropriation and $829,500 will be for the Research and Development appropriation. This represents an increase from 1990 of $319,300 in the Salaries and Expenses appropriation and $22,100 in the Research and Development appropriation, and no change in total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The increase in the Research and Development reflects increased research on combustion residues.

Develop Data to Support the Incineration Regulations. Health effects research will evaluate the comparative potency approach to assessment of risks posed by emissions from hazardous waste incinerators. Research will develop procedures for determining the relationship between exposure to emissions and the actual dose of emissions to a target organ within the body and between target dose and health effects.

Conduct Research on Municipal Solid Waste. Health effects research will evaluate potential effects of residues and emissions from municipal solid waste combustion. The focus will be on the relationship between the matrix in which agents occur (i.e. soil, chemical mixtures, etc) and health effects.

1990 Program

In 1990, the Agency is allocating a total of $1,449,000 supported by 11.6 total workyears for this program, of which $641,600 is from the Salaries and Expenses appropriation and $807,400 is from the Research and Development appropriation.

Data are being developed to support the incineration regulations. Research continues to provide methods and health effects data on municipal and hazardous waste combustion emissions and residual complex mixtures to assist in the assessment of potential human health risks. Pollutants from combustion control technologies are being assessed using biological potency methods to evaluate the potential hazards associated with waste incineration.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,135,100 supported by 11.8 total workyears for this program, of which $660,300 was from the Salaries and Expenses appropriation and $474,800 was from the Research and Development appropriation.

In 1989, this research program assessed the potential for health effects from air emissions and residues from incinerators using various bioassay procedures. Health endpoints considered included genotoxicity, pulmonary toxicity, and other major target organ effects. A procedure was proposed for use in evaluating the genotoxic potential of chlorinated organic products of incomplete combustion.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

In 1991, the Agency requests a total of $17,996,700 supported by 84.9 total workyears for this program, of which $5,570,300 will be for the Salaries and Expenses appropriation and $12,426,400 will be for the Research and Development appropriation. This represents an increase from 1990 of $390,400 in the Salaries & Expenses appropriation which includes 1.2 additional total workyears for municipal solid waste and alternative technologies and increased personnel and support costs. There is a decrease of $1,213,100 in the Research and Development appropriation because of decreased hazardous waste landfills research; decreased detection research of leaks from underground storage tanks; discontinued funding for the New Orleans Waste Management Research Center; and discontinued funding of research on using solar energy to treat wastes. Additional research on municipal solid waste will be conducted.

Develop data to Support the Use of Alternative Technologies. Research efforts will evaluate both existing and emerging alternative treatment processes for wastes likely to be restricted from land disposal. A major focus of the research program will be on reducing the production of pollutants at their source. Research will define assessment techniques to measure the reduction in quantities of pollutants produced and to identify potential areas for pollution prevention and risk reduction. Research on using solar energy to treat waste will be completed. The New Orleans Management Center in 1991, will be self-sustaining requiring no further EPA funds since it will be generating its operating funds through industrial, state and Federal grants.

Develop Data to Support the Land Disposal Regulations. Major issues associated with disposal of hazardous waste to the land will be addressed. Synthetic and clay liners will be studied and the effectiveness of alternative closure and monitoring procedures for surface impoundments will be investigated. Research also characterizes air emissions from hazardous waste treatment, storage, and disposal facilities (TSDFs) and to assess methods to control them. Technical Resource Documents will be updated for use by Regional and state agencies for permitting hazardous waste facilities and for enforcing applicable regulations.

Develop Data to Support the Incineration Regulations. Incineration research will focus on four areas: 1) characterizing performance of existing thermal technologies; 2) developing methods for compliance monitoring of these facilities; 3) characterizing products of incomplete combustion and their formation conditions; and 4) developing methods to predict performance to avoid process failure and control process reliability. Information is being developed for both industrial processes and incinerators to support regulation of toxic metal emissions, emission of products of incomplete combustion, and for refinement of the destruction removal efficiency rule.

Develop Procedures to Prevent and Contain Hazardous Releases. Underground storage tank (UST) research evaluates prevention, detection, and corrective action technologies to identify cost-effective, reliable techniques and equipment for USTs. This research has and will continue to produce publications on prevention practices, assessment of retrofit techniques for leaking underground storage tanks, and improvement of emergency response and remedial corrective action technologies.

Conduct Research on Municipal Solid Waste. The Municipal Innovative Technology Evaluation (MITE) program will continue. This program is designed to: 1) provide data on innovative equipment and techniques for managing municipal waste; 2) accelerate early commercialization of innovative equipment; 3) provide support and credibility to new techniques and equipment being developed at the bench and pilot-scale; and 4) develop promising techniques directly where a definite need exists. The initial emphasis is on demonstration of new or modified equipment processes or techniques at full or nearly full scale. Major issues associated with disposal of municipal solid waste to the land will be investigated. Research on municipal solid waste incinerators will be conducted. The emphasis will shift from field characterization to evaluation of various air pollution control devices and the assessment of ash utilization and disposal techniques.

Conduct Research for Emergency Planning and Community Right-to-Know. Efforts will focus on developing of process measurement techniques for prevention of accidental and chronic releases to help decisionmakers assess and respond to risks posed by hazardous substance releases.

1990 Program

In 1990, the Agency is allocating a total of $18,819,400 supported by 83.7 total workyears for this program, of which $5,179,900 is from the Salaries and Expenses appropriation and $13,639,500 is from the Research and Development appropriation.

Research efforts evaluate treatment processes for wastes likely to be restricted from land disposal. New research is being conducted to define assessment techniques to measure the reduction in quantities of pollutants produced and to identify potential areas for pollution reduction at the source. A new Municipal Innovative Technology Evaluation (MITE) program is underway. Research begins, through a cooperative agreement with DOE, on using solar energy to treat and dispose of waste. Additionally, a center will be established in New Orleans to provide an integrated approach for solving urban waste problems and to disseminate information.

Major issues associated with disposal of municipal and hazardous waste to the land continue to be addressed. Research also characterizes air emissions from hazardous waste facilities (TSDFs). Technical Resource Documents are being updated for use by Regional and State agencies.

Information is being developed for both industrial processes and incinerators to support regulations. Research on municipal solid waste incinerators is being conducted.

Underground storage tank (UST) research evaluates technologies to identify cost-effective, reliable techniques and equipment for USTs. Research on identification and evaluation of reliable leak detection methods for underground chemical tanks is being completed and the leak detection facility is being closed.

1989 Accomplishments

In 1989, the Agency obligated a total of $16,589,200 supported by 93.0 total workyears for this program, of which $5,366,500 was from the Salaries and Expenses appropriation and $11,222,700 was from the Research and Development appropriation.

Activities in 1989 included the evaluation of emerging alternative technologies and initiation of a waste minimization/ pollution prevention program. Emerging technologies for detecting leaks from petroleum and chemical tank systems were evaluated. Major land disposal issues and various thermal destruction systems techniques were investigated.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $7,222,500 supported by 50.0 total workyears for this program, of which $3,569,400 will be for the Salaries and Expenses appropriation and $3,653,100 will be for the Research and Development appropriation. This represents increases from 1990 of $264,400 and $76,100 respectively, with a decrease of 1.7 total workyears. The increase in the Salaries & Expense appropriation is attributed to rising personnel and support costs. The Research and Development appropriation is slightly increased because of the impact of the 1990 reductions taken for sequestration. The decrease in workyears reflects a reduction in several projects within transport and fate research.

Develop and Evaluate Procedures for Conducting Risk Assessments. Research on multimedia site assessment models in support of hazardous waste listing and delisting activities, methods for risk characterization of complex wastes, and methods and data for predicting subsurface contamination will be conducted. Transport models for predicting waste concentrations in saturated and unsaturated zones will be refined. Research will be conducted on bioavailability, uptake, and metabolism of hazardous chemicals by plants and animals.

Develop Procedures to Prevent and Contain Hazardous Releases. Research will focus on improving cost-effective treatment technologies.

1990 Program

In 1990, the Agency is allocating a total of $6,882,000 supported by 51.7 total workyears for this program, of which $3,305,000 is from the Salaries and Expenses appropriation and $3,577,000 is from the Research and Development appropriation.

Research continues on multimedia site assessment models in support of hazardous waste listing and delisting activities, methods for risk characterization of complex wastes, and methods and data for predicting subsurface contamination. An increased emphasis is now placed on ecological assessments. Transport models for predicting waste concentrations in saturated and unsaturated zones in the subsurface are being field evaluated, and a model describing speciation of metals is being developed. Bioavailability, uptake, and metabolism of hazardous chemicals by plants and animals are being investigated.

Procedures are being developed to prevent and contain hazardous releases. Research and field tests of biological, physical, and chemical methods, previously tried at hazardous waste sites, are conducted to determine their cost and applicability to cleanup of pollutants from underground storage tanks.

1989 Accomplishments

In 1989, the Agency allocated a total of $7,873,300 supported by 53.3 total workyears for this program, of which $3,453,000 is from the Salaries and Expenses appropriation and $4,420,300 is from the Research and Development appropriation.

Research supported the RCRA listing, delisting, risk assessment, siting, and land disposal restriction programs. Multimedia assessment methods and evaluation of waste management and treatment needs, based on potential human health and environmental impacts, were developed. Laboratory experiments were conducted to determine plant uptake of hazardous chemicals. The multimedia bioassessment screening protocol used in evaluating damage caused by spills and potential risk associated with waste sites was revised based on the results of field evaluations. In addition, studies on subsurface characteristics influencing heavy metal contamination of ground water, evaluations of immiscible flow processes controlling contaminant transport in ground water, and validation of existing saturated and unsaturated zone contaminant transport models were conducted.

TECHNICAL INFORMATION AND LIAISON

1991 Program Request

Technical Information and Liaison. The Agency requests $1,000,000 in the Research and Development appropriation for this activity in 1991. This represents an $1,000,000 increase from 1990 since this program activity did not exist in 1989. The technical information needs of the Hazardous Waste Program will be addressed by providing handbooks and PC expert systems to State and local decision makers in such areas as: 1) disposal of residues; 2) selecting appropriate treatment technologies; and 3) source reduction and recycling. It is a new funding category, formerly included in the Monitoring Systems and Quality Assurance program element.

1990 Program

The Agency has not allocated any resources to this program activity since this activity does not exist in 1990.

INTEGRATED HAZARDOUS WASTE RESEARCH

1991 Program Request

The Agency requests no resources for this activity in 1991. Since the Center for Environmental Management at Tufts University has been funded by EPA since 1983, the Agency feels this Center is now fully established and can obtain continued funding on a competitive basis.

1990 Program

In 1990, the Agency is allocating a total of $2,435,100 supported by no workyears for this program, all of which is from the Research and Development appropriation.

The program is addressing a wide variety of research, education and public policy environmental issues. Several on-going projects will be completed. New activities related to pollution prevention, international environmental policy and environmental health policy and education will be initiated.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,500,000 for this program from the Research and Development appropriation. These resources were used to continue funding research projects on health effects, monitoring systems, alternative technologies, risk communication and waste minimization. Major accomplishments included the development of a model workshop for regional environmental health policy officials, and field testing of two in-situ chemical sensor measurement systems. Others are the development of 28 case studies to understand how multinational companies implement effective environmental programs and development of biomarker protocols for the rapid detection of environmental pollutants.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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HAZARDOUS WASTE
Waste Management Regulations, Guidelines & Policies

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Regulations, Guidelines & Policies - Hazardous Waste						
Salaries & Expenses		$16,277.9	$18,401.3	$17,943.6	$21,575.0	$3,631.4
Abatement Control and Compliance		$41,745.0	$38,508.2	$38,016.2	$40,429.5	$2,413.3
	TOTAL	$58,022.9	$56,909.5	$55,959.8	$62,004.5	$6,044.7
Regulations, Guidelines & Policies - Air and Radiation						
Salaries & Expenses		$642.8	$663.1	$646.2	$851.5	$205.3
Abatement Control and Compliance		$2,998.9	$3,008.8	$2,937.0	$3,073.3	$136.3
	TOTAL	$3,641.7	$3,671.9	$3,583.2	$3,924.8	$341.6
Regulations, Guidelines & Policies - Water						
Salaries & Expenses		$2,453.9	$2,016.6	$2,168.9	$1,965.6	-$203.3
Abatement Control and Compliance		$4,430.7	$4,558.8	$4,467.9	$3,966.5	-$501.4
	TOTAL	$6,884.6	$6,575.4	$6,636.8	$5,932.1	-$704.7
Regulations, Guidelines & Policies - UST						
Salaries & Expenses		$2,791.7	$3,681.1	$3,291.6	$4,575.0	$1,283.4
Abatement Control and Compliance		$3,888.0	$4,101.3	$4,049.0	$4,165.8	$116.8
	TOTAL	$6,679.7	$7,782.4	$7,340.6	$8,740.8	$1,400.2
TOTAL:						
Salaries & Expenses		$22,168.3	$24,762.1	$24,050.3	$28,967.1	$4,916.8
Abatement Control and Compliance		$53,060.6	$50,177.1	$49,470.1	$51,635.1	$2,165.0
Waste Management Regulations, Guidelines & Policies	TOTAL	$75,228.9	$74,939.2	$73,520.4	$80,602.2	$7,081.8
PERMANENT WORKYEARS						
Regulations, Guidelines & Policies - Hazardous Waste		231.1	257.1	256.8	264.8	8.0
Regulations, Guidelines & Poiciies - Air and Radiation		10.9	13.0	13.0	13.0	0.0
Regulations, Guidelines & Policies - Water		54.4	48.7	47.9	38.7	-9.2

HAZARDOUS WASTE
Waste Management Regulations, Guidelines & Policies

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
Regulations, Guidelines & Policies - UST	52.0	68.2	65.6	68.2	2.6
TOTAL PERMANENT WORKYEARS	348.4	387.0	383.3	384.7	1.4
TOTAL WORKYEARS					
Regulations, Guidelines & Policies - Hazardous Waste	238.3	257.1	256.8	264.8	8.0
Regulations, Guidelines & Policies - Air and Radiation	11.3	13.0	13.0	13.0	0.0
Regulations, Guidelines & Policies - Water	59.4	48.7	48.7	38.7	-10.0
Regulations, Guidelines & Policies - UST	56.1	68.2	68.2	68.2	0.0
TOTAL WORKYEARS	365.1	387.0	386.7	384.7	-2.0

HAZARDOUS WASTE

Waste Management Regulations, Guidelines, and Policies

Budget Request

The Agency requests a total of $80,602,200 and 384.7 total workyears for 1991, an increase of $7,081,800 and a decrease of 2 total workyears from 1990. Of the request, $28,967,100 will be for the Salaries and Expenses appropriation and $51,635,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $4,916,800 in the Salaries and Expenses appropriation, and an increase of $2,165,000 in the Abatement, Control and Compliance appropriation. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase Abatement, Control and Compliance reflects expanded pollution prevention activities and additional program management support. The decrease in workyears reflects completed regulatory activities in the water program.

REGULATIONS, GUIDELINES, AND POLICIES -- HAZARDOUS WASTE

1991 Program Request

The Agency requests a total of $62,004,500 and 264.8 total workyears for this program, of which $21,575,000 will be for the Salaries and Expenses appropriation and $40,429,500 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,631,400 for Salaries and Expenses, an increase of $2,413,300 for Abatement, Control and Compliance, and an increase of 8.0 total workyears from the 1990 levels. The increase in total workyears and Abatement, Control, and Compliance reflects expanded pollution prevention activities and additional program management support. The increase in Salaries and Expenses reflects increased personnel and support costs.

The Agency will continue the development and promulgation of major regulations, including the Hazardous and Solid Waste Amendments (HSWA) mandated waste listings, representing a significant step in fulfilling the Agency's HSWA requirements. In addition, the Agency will propose guidelines for mixed waste and management standards for mining wastes. The Agency will address the growing national concern over waste combustion by finalizing a rule for burning hazardous waste, issuing waste combustion guidance, and developing standards for managing municipal waste combustion ash.

The Agency will increase pollution prevention efforts by coordinating waste minimization activities, providing technical assistance, conducting a recycling campaign for public media, and producing a waste minimization report to Congress. The Agency will continue its medical waste efforts, completing a report to Congress, and providing technical support, training, and outreach assistance to states involved with the medical waste tracking demonstration program.

The Agency will expand efforts to address non-hazardous waste issues by serving as a technical clearinghouse for non-hazardous waste management information, options, and guidelines. The Agency will assist states to develop solid waste management plans, and will produce non-hazardous waste guidelines. EPA will provide assistance to states and Regions in working with Indian Tribes on non-hazardous waste issues.

The Agency will continue to develop and disseminate to Regional and state permit writers technical guidance on new regulations, including new procurement guidelines, tire guidelines for states, corrective action guidelines, and mixed waste guidelines.

1990 Program

The Agency is allocating a total of $55,959,800 and 256.8 total workyears for this program, of which $17,943,600 is from the Salaries and Expenses appropriation and $38,016,200 is from the Abatement, Control and Compliance appropriation.

The Agency is continuing to develop and promulgate major regulations required by HSWA. EPA is proposing regulations requiring corrective action at solid waste management units and revisions to hazardous waste facility location standards. The Agency is completing the treatment standards for the land disposal restrictions schedule and is finalizing the Organic Toxicity Characteristic, increasing the number of wastes regulated as hazardous. EPA is also finalizing regulations to list primary treatment sludge from petroleum refining processes.

The Agency serves as a source for non-hazardous waste management information, options, and guidelines. Activities include developing and disseminating technical and general guidance to assist states, local governments, and citizens in implementing recycling and source reduction programs. The Agency is developing large volume waste management strategies and programs. Mining waste management standards are being developed, along with reports to Congress on mineral processing and state oil and gas programs.

The Agency continues to process state HSWA authorization packages, and develop and disseminate to Regional and state permit writers technical guidance on new regulations, including guidance on the land disposal restrictions, hazardous and solid waste incineration, and corrective action provisions.

1989 Accomplishments

In 1989, the Agency obligated a total of $58,022,900 supported by 238.3 total workyears for this program, of which $16,279,900 was from the Salaries and Expenses appropriation and $41,743,000 was from the Abatement, Control and Compliance appropriation.

The Agency addressed important HSWA and non-HSWA regulatory revisions. The Agency completed treatment standards for the second Third of the wastes scheduled for the land disposal restrictions program, and began work on the third Third requirements. EPA promulgated Federal procurement guidelines for tires and insulation. The Agency amended the universe of wastes subject to Subtitle C management standards by proposing listings of wood preserving wastes and methyl bromide, and by clarifying the status of mineral processing wastes. The Agency promulgated the delay of closure rule for hazardous waste facilities that are capable of safely receiving non-hazardous wastes.

The Agency continued to develop a nationwide program for the safe management of non-hazardous (Subtitle D) wastes. In support of the pollution prevention objectives, the Agency provided assistance and information to government, industry, and consumers to foster increased recycling and source reduction. The Agency issued the Agenda for Action, which outlined options and preferred practices to help states and municipalities develop integrated solid waste management programs. In addition, the Agency produced three reports to Congress: Solid Waste Disposal in the United States, Municipal Solid Waste Strategy, and Management of Hazardous Wastes from Educational Institutions.

REGULATIONS, GUIDELINES, AND POLICIES -- AIR AND RADIATION

1991 Program Request

The Agency requests a total of $3,924,800 supported by 13.0 total workyears for this program, of which $851,500 will be for the Salaries and Expenses appropriation and $3,073,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $205,300 for the Salaries and Expenses appropriation, an increase of $136,300 in the Abatement, Control and Compliance appropriation, and no change in total workyears from 1990.

In 1991 the program will continue to support the promulgation of regulations for volatile organic compound (VOC) emissions from seven types of treatment, storage, and disposal facility (TSDF) area sources: surface impoundments, landfills, wastewater treatment tanks, waste piles, land treatment facilities, pretreatment facilities, and transfer operations. The Agency has estimated that these sources emit 2.0 million tons per year of VOC and toxic air pollutants that have been associated with up to 140 cancer deaths per year. Some sources will require additional regulations to control emissions of specific toxic constituents that will not be covered by the 1991 rule. Resources will be provided for data collection to promulgate regulations for these toxic pollutants in a future year. This program will also provide technical support for states and EPA Regions in implementing the TSDF regulations.

1990 Program

In 1990 the Agency is allocating a total of $3,583,200 supported by 13.0 total workyears to this program, of which $646,200 is from the Salaries and Expenses appropriation and $2,937,000 is from the Abatement, Control and Compliance appropriation.

In 1990 EPA is continuing to develop standards for the seven types of TSDF area sources listed above. EPA has promulgated standards for equipment leaks at these facilities and has proposed standards for other sources. The Agency will propose additional regulations in late 1990. In addition, the Agency will promulgate an accelerated rule covering a subset of TSDF area source types including fugitive emissions and waste solvents.

1989 Accomplishments

In 1989 the Agency obligated a total of $3,641,700 supported by 11.3 total workyears, of which $642,800 was from the Salaries and Expenses appropriation and $2,998,900 was from the Abatement, Control and Compliance appropriation. In 1989 EPA continued work on the development of interim TSDF rules.

REGULATIONS, GUIDELINES, AND POLICIES -- WATER

1991 Program Request

In 1991, the Agency requests a total of $5,932,100 supported by 38.7 total workyears for this program, of which $1,965,600 will be for the Salaries and Expenses appropriation and $3,966,500 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $203,300 in Salaries and Expenses, a decrease of $501,400 in Abatement, Control and Compliance and a decrease of 10.0 workyears. The decreases reflect a reduction in the number of publicly owned treatment works (POTWs) requiring corrective action, completion of the double-liner waiver assessment and a decline in the level of oversight needed to review facility exemption petitions.

In 1991, one of the Agency's major pollution prevention activities is improving the pretreatment program for controlling hazardous wastes from industrial users of POTWs. Information gathering and sampling of specific Domestic Sewage Study (DSS) industries will continue. The Agency will continue to develop effluent limitations, guidelines and standards for several DSS industries, including machinery manufacturing and rebuilding, hazardous waste treatment and pharmaceuticals manufacturing. EPA will issue technical guidance and provide assistance on additional local limits, particularly in relation to new sludge technical regulations and on POTW enforcement response plans.

Regions and states will continue to revise POTW permits to include requirements for spill prevention plans, sewage sludge, whole effluent toxicity screening or testing and modification of pretreatment program implementation. EPA and states will continue pretreatment audits and inspections of POTWs and review and approval of new local limits for controlling hazardous pollutants in discharges and sludges. EPA will complete issuance of rider permits to incorporate follow-up actions where necessary and will issue additional permits as POTWs are identified as needing corrective actions. EPA will assess compliance and take enforcement action to ensure reporting requirements and other RCRA permit-by-rule requirements are satisfied. Work will continue in completing ongoing RCRA facility assessments and remedial investigations.

The Agency will continue to review "no migration" petitions to continue injecting banned wastes. Underground Injection Control (UIC) permit modifications required to implement the land ban provisions will be reviewed. The Agency will continue to provide training for modeling applied to Class I well petition work. In addition, EPA will initiate a study to determine whether some Class I hazardous waste regulations should be applied to all Class I wells. A corrective action program will continue to be implemented for Class I hazardous waste injection wells, including assessments of prior or continuing releases and proposals for clean-up. The Regions will prepare assessments/site investigations of wells where a previous or continuing release has been identified. Proposals for clean-up will be developed and incorporated into the UIC permits.

1990 Program

In 1990, the Agency is allocating a total of $6,636,800 supported by 48.7 total workyears for this program, of which $2,168,900 is from the Salaries and Expenses appropriation and $4,467,900 is from the Abatement, Control and Compliance appropriation.

The Agency is continuing information-gathering and sampling of specific DSS industries -- wastewaters are being screened and analyzed for hazardous constituents. EPA will publish data summaries for 15 industries in 1990. The Agency will continue development of effluent limitations, guidelines and standards for several DSS industries (hazardous waste treatment, pharmaceuticals manufacturing, etc.). The Agency is formulating guidance and tracking, overseeing and assisting states in implementing the new specific discharge prohibitions, including ignitability/explosivity and reactivity/fume toxicity. The Agency is establishing hazardous waste discharge notification improvements, numerical discharge limits or other controls to protect worker health and safety.

EPA is continuing to implement corrective action requirements for a small number of POTWs and continues to focus on control of hazardous and toxic pollutants through implementation of recommendations from the DSS. Pretreatment audits and inspections continue to focus on identification of POTW corrective action requirements and appropriate follow-up assessments and investigations.

Headquarters continues to develop guidance and provide technical advice and assistance for Regions and states in implementing hazardous waste disposal restrictions, in reviewing facility petitions and in enforcing the loss of facility interim status.

Due to the planned promulgation of the remaining schedule of hazardous wastes regulated under RCRA Section 3004(g), EPA expects to review up to 40 petitions and revise or modify up to 75 hazardous waste injection well permits from operators of hazardous waste injection wells seeking exemptions from the injection ban. The Agency will provide technical assistance in developing geologic data; modeling of waste fate and transport is under development. Regional UIC permit writers are conducting corrective action investigations for Class I hazardous waste wells, giving priority to wells with permits issued after November 1984 without a schedule for corrective action. Regions will also continue to review petitions from operators of hazardous waste injection wells seeking exemptions from the injection ban under Part 148.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,884,600 supported by 59.4 total workyears, of which $2,453,900 was from the Salaries and Expenses and $4,430,700 was from the Abatement, Control and Compliance appropriations.

EPA continued development of regulations for pharmaceuticals, machinery manufacturing and rebuilding, hazardous waste treatment and pesticides formulating/packaging industries. Sludge use and disposal screening for RCRA constituents continued. The Regions and POTWs developed new local limits to address hazardous pollutants and increased the number of spill prevention plans initiated. The Agency also proposed changes to the general pretreatment regulations based on recommendations from the DSS.

EPA and states continued to implement the corrective action requirement for POTWs that accept hazardous waste. The Regions undertook or oversaw facility assessments, conducted visual site or sampling inspections and implemented remedial investigations and corrective measures at appropriate POTWs. Implementation of RCRA and pretreatment requirements, based on the DSS, continued. Approximately 40 no-migration petitions were received and review began during 1989. Regional UIC permit writers conducted corrective action investigations for Class I hazardous waste wells.

REGULATIONS, GUIDELINES, AND POLICIES -- UNDERGROUND STORAGE TANKS (UST)

1991 Program Request

The Agency requests a total of $8,740,800 supported by 68.2 total workyears for this program of which $4,575,000 is for Salaries and Expense appropriation and $4,165,800 will be for Abatement, Control and Compliance appropriation. This represents increases of $1,283,400 in Salaries and Expenses and $116,800 in Abatement, Control and Compliance and no increase of workyears. The increases support increased personnel costs and additional implementation assistance to states and Indian tribes.

The Agency will implement a national underground storage tank (UST) program to prevent pollution caused by leaking USTs. EPA will ensure that states continue work to meet the conditions for Federal approval of their UST programs. The number of state program approvals will increase as many states complete the legislative and regulatory changes required to ensure their programs are no less stringent than the Federal program, including the development of adequate enforcement authorities and capacities. For states not applying for approval, the Agency will continue to encourage and assist these states in the development and implementation of their UST programs.

The Agency will increase outreach efforts to tribal leaders and owners/operators of tanks on Indian lands. The Agency will also provide Indian tribes with compliance and enforcement assistance. The UST program on Indian lands will expand to include monitoring compliance with all UST regulations, providing compliance assistance to Indian tank owners/operators, and continuing outreach to tribal leaders. The Agency will utilize outreach efforts to promote voluntary compliance with the leak detection deadline for tanks installed before 1974 and will seek to educate the public and the regulated community.

1990 Program

The Agency is allocating a total of $7,340,600 supported by 68.2 total workyears of which $3,291,600 is from Salaries and Expenses and $4,049,000 is from Abatement, Control and Compliance appropriation.

The basic approach to accomplishing the environmental goals of the UST program is to develop, support and improve, state and local programs. Efforts in this area include helping the states develop more streamlined processes, and better technical and management tools. As technical and leak detection regulations are phased-in, the Agency will assist the tank owners' efforts to assess compliance with the first phase-in group of USTs 25 years of age and older. The Agency is developing standard test procedures for leak detection equipment that will allow tank owners to choose equipment that meet Agency requirements. The Agency is conducting a nationwide marketing campaign to promote resource efficient methods for states to monitor owner/operator compliance and to take enforcement actions against violators where necessary. One pilot state has used these methods to achieve a 90 percent compliance rate without resorting to the use of resource-intensive formal enforcement orders in their first compliance group. The Agency will continue to promote these methods in other states throughout the year. The Agency has completed videos on installation and tank closures, and is preparing a video on conducting UST inspections. The Agency has also completed a Spanish language brochure describing the UST regulations.

The Agency is continuing to provide technical support for state regulatory development and is encouraging states to apply for Federal program approval. The Agency is also helping states manage their increasing workloads by providing technical support on their data management information systems.

The Agency is working with owners/operators and municipalities to meet the Federal financial responsibility requirements by finalizing the financial test allowing municipalities to self-insure. In addition, the Agency is assisting states in developing state assurance programs and loan funds. The loan programs would be used by owners/operators to upgrade or replace their tanks, preventing many leaks from ever occurring. The assurance programs will help owners/operators to meet their financial responsibility requirements. The Agency is reviewing proposed state trust funds as they are submitted.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,679,700 supported by 56.1 workyears, of which $2,791,700 was from the Salaries and Expenses appropriation and $3,888,000 was from the Abatement, Control and Compliance appropriation.

The Agency issued final regulations on corrective action, leak detection, and technical performance standards for new and existing tanks that contain petroleum products and hazardous substances. In addition, the Agency finalized regulations governing financial responsibility requirements, and developed supplemental policies and guidance on the process and requirements for state regulatory program authorization.

The Agency negotiated UST grants with all states and provided technical assistance and guidance for implementation and enforcement. These grants provided seed money for state UST programs.

The Agency finalized and distributed a number of useful tools such as videos demonstrating correct procedures for tank installations and closure. In addition, the Agency also developed several brochures, including Oh No and Leak Detection, which describes technical standards in plain English, and produced a handbook on building state compliance programs. The Agency distributed these tools to the regulated community and to those responsible for ensuring compliance with UST standards and guidelines.

The Agency provided support and services to states through routine, continuous communications and reviews. The Agency assisted the states in improving performance in areas such as tank inspections, closures, enforcement, administrative procedures and in developing communication strategies. The Agency's compliance strategy emphasized and promoted innovative techniques to achieve voluntary compliance and to enforce when necessary.

HAZARDOUS WASTE
Financial Assistance

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Hazardous Waste Management Financial Assistance To States						
Abatement Control and Compliance		$66,753.0	$68,914.3	$68,031.7	$88,000.0	$19,968.3
	TOTAL	$66,753.0	$68,914.3	$68,031.7	$88,000.0	$19,968.3
Underground Storage Tanks State Grants						
Abatement Control and Compliance		$9,178.7	$8,860.6	$8,747.4	$9,000.0	$252.6
	TOTAL	$9,178.7	$8,860.6	$8,747.4	$9,000.0	$252.6
TOTAL:						
Abatement Control and Compliance		$75,931.7	$77,774.9	$76,779.1	$97,000.0	$20,220.9
Financial Assistance	TOTAL	$75,931.7	$77,774.9	$76,779.1	$97,000.0	$20,220.9

HAZARDOUS WASTE

Financial Assistance

Budget Request

The Agency requests a total of $97,000,000 for this program for the Abatement, Control and Compliance appropriation. This is an increase of $20,220,900 from the level provided in 1990.

HAZARDOUS WASTE MANAGEMENT FINANCIAL ASSISTANCE TO STATES

1991 Program Request

The Agency requests a total of $88,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $19,968,300 to enhance state capability through increased permitting, enforcement, and information management efforts.

In 1991, the Agency will assist the states in their continued efforts to develop legislation and regulations to achieve equivalence with the Federal hazardous waste management program. Almost all states will be authorized for the base Resource Conservation and Recovery Act (RCRA) program, and these states will be developing the capability to adopt corrective action and other provisions of Hazardous and Solid Waste Amendments of 1984 (HSWA).

The permitting program will continue the shift, begun in 1990, from permitting operating incinerators to other mandated permitting activities. The Agency will increase resources for processing post-closure permits for land disposal facilities to address an additional 300 of these environmentally significant facilities. EPA will also accelerate the permitting of storage and treatment facilities to meet the November 1992 statutory deadline. By the end of 1991, approximately 75% of the facilities subject to the deadline will have permits or permits being processed. The states will continue to process modifications to operating permits as required. In addition, the states will continue to review and approve closure plans for incinerators and storage and treatment facilities, and will process appeals to permit decisions, as necessary.

The states will ensure that non-compliance is identified and addressed through timely and appropriate enforcement actions and that handlers are returned to compliance. Compliance monitoring of generators and transporters will be a priority activity, especially for compliance with land disposal restrictions. The states will conclude enforcement actions against facilities, oversee adherence to compliance schedules, and take enforcement actions for violations of approved closure plans. The states will annually inspect critical land disposal and incineration facilities and conduct mandated inspections at Federal and local government facilities and at a targeted portion of generators and transporters. The states will also inspect one-half of all storage and treatment facilities and other land disposal facilities. In addition, the states will conduct inspections to support the processing of permit applications and to ensure compliance with permit provisions or existing administrative and judicial actions. New facilities brought into regulation by wood preserving, hazardous waste fuel, organic toxicity and mining waste regulations will increase the number of facilities where state inspections and enforcement actions will be necessary.

The states will conduct oversight of owner/operator RCRA facility inspections/corrective measure studies (RFI/CMS) at permitted and environmentally significant closed facilities. These facilities will be prioritized based on risk, with the most environmentally significant closures addressed first. The states will ensure that corrective action initiated in prior years is fully supported through determination and implementation of the appropriate remedy. The owner/operators will initiate corrective measures through corrective action orders or as a result of a schedule of compliance in the permit. States will monitor corrective action progress with thorough oversight of the owner/operators' RFI/CMS and implementation of the remedy to ensure that work is performed correctly. The states will initiate new facility assessments at storage and treatment facilities seeking permits. States will also initiate judicial actions when a permit schedule or administrative order is considered insufficient to require the owner/operator to undertake corrective measures that would protect human health and the environment.

The Agency will increase resources to fund national implementation of a hazardous waste data management system that will greatly expand the states' and EPA's ability to input and retrieve information critical to successful program management.

1990 Program

In 1990, the Agency is allocating a total of $68,031,700 for this program, all of which is from the Abatement, Control and Compliance appropriation.

The Agency requires states to amend their programs to incorporate the provisions of RCRA and HSWA. The states are proposing legislation and upgrading regulations to achieve equivalence with the Federal hazardous waste management program, and are applying to EPA for authorization to administer the program.

States are directing permitting efforts toward successfully meeting the November 1989 deadline for issuing permits to all operating hazardous waste incineration facilities; toward permitting environmentally significant storage and treatment facilities; and toward processing modifications to existing permits. The states are emphasizing compliance monitoring and enforcement efforts to ensure adequate environmental safeguards covering the generation, transportation, and disposal of hazardous waste. The states are investigating releases at facilities to determine the need for corrective action and, as releases are identified, are ensuring that owner/operators address the contamination.

1989 Accomplishments

In 1989, the Agency obligated a total of $66,753,000 for this program, all of which was from the Abatement, Control and Compliance appropriation.

In 1989, the states continued to develop legislation and regulations to achieve equivalence with the Federal hazardous waste management program. EPA granted the states authority to administer important HSWA regulations. The states and Regions worked jointly on processing permits for those HSWA provisions for which states were not authorized, particularly corrective action.

The states successfully processed land disposal facility permit applications to meet the November 1988 HSWA deadline. The Agency and states gave the processing of incinerator permit applications a high priority due to the November 1989 deadline.

The states performed mandated inspections and took appropriate enforcement actions. In addition, the states performed RCRA Facility Assessments to support the permitting program and to prioritize sites for corrective action.

UNDERGROUND STORAGE TANKS STATE GRANTS

1991 Program Request

The Agency requests a total of $9,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $252,600 from 1990. This increase will be used to provide additional support and to leverage state funds.

This request will provide states with a resource base to develop and implement state underground storage tanks (UST) programs. States that have attained the necessary legislative and regulatory capacities will apply for state program approval. Some states will develop capabilities for administering the entire Federal program, while others will continue to develop and update their legislative and regulatory authorities. These authorities will include technical, leak detection, financial responsibility, and corrective action standards. States will also continue to work towards achieving compliance with adequate tank closure and pressurized piping requirements and building their enforcement programs.

The leak detection and financial responsibility regulations will continue to increase the states' workload as USTs that are unable to meet applicable requirements must be either upgraded or closed. The states will process and/or review all upgrades and closures.

1990 Program

The Agency is allocating a total of $8,747,400 all of which is from the Abatement, Control and Compliance appropriation.

The states have been using grant funds as the core of their program development efforts, primarily on prevention programs including notification, data systems to track UST facilities, new tank installation, leak detection, and tank closure. Additionally, the states are currently implementing portions of the Federal regulations.

Some states are currently developing independent funding sources for their UST programs from tank fees, state taxes, and gasoline taxes. These state contributions are essential to the success of the states' prevention programs. The UST state grants provide "seed money" of about $162,000 per state for these efforts.

The phasing-in of the financial responsibility and leak detection regulations are generating additional workload for the states. These regulations are leading to an increased number of tank closures and tank upgrades, that require the states to review and process these actions.

1989 Accomplishments

In 1989, the Agency obligated $9,178,700 for this program, all of which was from Abatement, Control and Compliance appropriation.

UST grant funds were used primarily to stimulate the development of state UST programs. Most states have initiated legislative and regulatory changes necessary for the state program to be no less stringent than the Federal standards. States also commenced building capabilities for administering the Federal UST program in its entirety.

HAZARDOUS WASTE
Waste Management Regulatory Strategies Implementation

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Hazardous Waste Management Regulatory Strategies Implementation						
Salaries & Expenses		$15,769.9	$16,546.6	$16,516.0	$20,710.0	$4,194.0
Abatement Control and Compliance		$8,333.6	$9,973.6	$9,779.7	$11,599.7	$1,820.0
	TOTAL	$24,103.5	$26,520.2	$26,295.7	$32,309.7	$6,014.0
TOTAL:						
Salaries & Expenses		$15,769.9	$16,546.6	$16,516.0	$20,710.0	$4,194.0
Abatement Control and Compliance		$8,333.6	$9,973.6	$9,779.7	$11,599.7	$1,820.0
Waste Management Strategies Implementation	TOTAL	$24,103.5	$26,520.2	$26,295.7	$32,309.7	$6,014.0
PERMANENT WORKYEARS						
Hazardous Waste Management Regulatory Strategies Implementation		348.8	379.8	353.9	426.2	72.3
TOTAL PERMANENT WORKYEARS		348.8	379.8	353.9	426.2	72.3
TOTAL WORKYEARS						
Hazardous Waste Management Regulatory Strategies Implementation		373.4	379.8	379.0	426.2	47.2
TOTAL WORKYEARS		373.4	379.8	379.0	426.2	47.2

HAZARDOUS WASTE

Hazardous Waste Management Regulatory Strategies Implementation

Budget Request

The Agency requests a total of $32,309,700 supported by 426.2 total workyears for 1991, an increase of $6,014,000 and 47.2 total workyears from 1990. Of the request, $20,710,000 will be for the Salaries and Expenses appropriation and $11,599,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $4,194,000 in the Salaries and Expenses appropriation and an increase of $1,820,000 in the Abatement, Control and Compliance appropriation.

HAZARDOUS WASTE MANAGEMENT REGULATORY STRATEGIES IMPLEMENTATION

1991 Program Request

The Agency requests a total of $32,309,700 and 426.2 total workyears for this program, of which $20,710,000 will be for the Salaries and Expenses appropriation and $11,599,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $4,194,000 for Salaries and Expenses, $1,820,000 for Abatement, Control and Compliance, and an increase of 47.2 total workyears. The increase in Salaries and Expenses reflects increases in personnel and support costs. The increase in Abatement, Control and Compliance and workyears will support additional permitting efforts.

The largest area of growth will be in the Agency's permitting efforts, conducted in cooperation with the states. The permitting program will continue the shift, begun in 1990, from permitting operating incinerators to processing post-closure permits for land disposal facilities. Storage and treatment facility permitting, which is subject to the 1992 statutory deadline, will be accelerated. By the end of 1991, approximately 75% of the facilities subject to the deadline will have permits or permits being processed. The Regions will continue to process modifications to operating permits, which will require revisions due to changes in facility processes, facility expansions, and the need to incorporate corrective action provisions as remediation activities progress. The Regions will continue to review and approve adequate closure plans, and will process appeals to permit decisions as necessary.

The Regions will conduct municipal non-hazardous waste (Subtitle D) activities. The Regions will provide technical and financial support to states and other eligible organizations, such as municipalities and universities, that are interested in pursuing unique projects that will support the recycling and source reduction goals of the Agency's Agenda for Action. The Agenda calls for a national program to increase recycling of municipal refuse and greater attention to reducing the generation of solid wastes. The Agency will assist states as they revise statutes and regulations in accordance with the new national Subtitle D criteria, and will review state program revision packages. EPA will address large volume waste through targeted cooperative agreements with states to fund investigations of state mining waste programs.

The Regions and states worked together to process permit applications containing HSWA provisions for which the states were not yet authorized. High priorities included processing the remainder of land disposal facility permit applications by the November 1988 deadline and processing a large number of incineration facility permits to work toward the November 1989 deadline.

Information management resources will fund implementation of a national data management system that will greatly expand EPA's and the states' ability to enter and retrieve information critical to successful program management. The Regions will increase technical assistance to states to develop and maintain Federally-equivalent hazardous waste management programs. This support from the Regions, along with funding available to the states through the Hazardous Waste Management Financial Assistance program, is designed to develop state capability to effectively manage hazardous waste programs. Almost all states will be authorized for the pre-Hazardous and Solid Waste Amendments (HSWA) program and these states will be working toward authorization for HSWA provisions such as corrective action.

1990 Program

In 1990, the Agency is allocating a total of $26,295,700 and 379.0 total workyears for this program, of which $9,779,700 is from the Abatement, Control and Compliance appropriation and $16,516,000 is from the Salaries and Expenses appropriation.

Permitting efforts are focused on completing determinations on incineration permit applications by the November 1989 deadline, continuing the processing of environmentally significant storage and treatment facility permits, and increasing emphasis on issuing permits to ensure adequate post-closure care of land disposal facilities. The Regions are completing the review and approval of land disposal facility closure plans in 1990.

The Regions are working jointly with the states on all aspects of the hazardous waste program. The Regions are processing those portions of permits for which states are not yet authorized, and are providing technical oversight of state activities. The Regions are supporting the enhancement of state capability by providing assistance with state regulatory and legislative development. This Federal/state relationship provides a framework for ensuring national program consistency and will ultimately allow states to run the hazardous waste program independently. The Regions are working with states and other organizations, through technical and financial assistance, to implement the recommendations of the Agency's solid waste Agenda for Action.

1989 Accomplishments

In 1989, the Agency obligated a total of $24,103,500 supported by 373.4 total workyears for this program, of which $15,769,900 was from the Salaries and Expenses appropriation and $8,333,600 was from the Abatement Control and Compliance appropriation.

In 1989, the Regions supported the states in the development of hazardous waste management programs equivalent to the Federal program. With 45 states authorized for the pre-HSWA program, the Agency focused on oversight and technical support activities. The Regions provided technical assistance to the states as they developed legislation and regulations consistent with the provisions of HSWA and with regulatory revisions to the Federal base program.

HAZARDOUS WASTE

Emergency Planning Community Right To Know - Title III

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Emergency Planning Community Right To Know						
Salaries & Expenses		$2,087.3	$2,913.3	$2,628.3	$2,540.0	-$88.3
Abatement Control and Compliance		$1,923.7	$4,369.3	$4,313.5	$2,938.0	-$1,375.5
	TOTAL	$4,011.0	$7,282.6	$6,941.8	$5,478.0	-$1,463.8
TOTAL:						
Salaries & Expenses		$2,087.3	$2,913.3	$2,628.3	$2,540.0	-$88.3
Abatement Control and Compliance		$1,923.7	$4,369.3	$4,313.5	$2,938.0	-$1,375.5
Emergency Planning Community Right To Know	TOTAL	$4,011.0	$7,282.6	$6,941.8	$5,478.0	-$1,463.8
PERMANENT WORKYEARS						
Emergency Planning Community Right To Know		26.6	48.0	30.7	37.0	6.3
TOTAL PERMANENT WORKYEARS		26.6	48.0	30.7	37.0	6.3
TOTAL WORKYEARS						
Emergency Planning Community Right To Know		28.9	48.0	32.0	37.0	5.0
TOTAL WORKYEARS		28.9	48.0	32.0	37.0	5.0

Emergency Planning and Community Right-to-Know -- Title III

Budget Request

The Agency requests a total of $5,478,000 supported by 37.0 total workyears for 1991. Of the request, $2,540,000 will be for the Salaries and Expenses appropriation and $2,938,000 will be for the Abatement, Control and Compliance appropriation. These levels represent a total decrease of $1,463,800 and an increase of 5.0 workyears from 1990.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW -- TITLE III

1991 Program Request

The Agency requests a total of $5,478,000 supported by 37.0 total workyears for 1991. Of the request, $2,540,000 will be for the Salaries and Expenses appropriation and $2,938,000 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $88,300 for Salaries and Expenses, a decrease of $1,375,500 for Abatement, Control and Compliance and an increase of 5 total workyears from 1990. The increase in workyears will be allocated to enforcement. This will enable the Agency to assist state and local governments as they incorporate Title III enforcement into their institutional structure. Fewer dollar resources are needed due to completion of national training and technical assistance support.

The increase in enforcement resources will enable the Agency to begin to address noncompliance with the emergency planning provisions and release and inventory notification requirements of Sections 302, 303, 304, 311, and 312 of the Emergency Planning and Community Right-to-Know Act of 1986. The Agency will initiate, and conduct with the states wherever practical, a targeted number of routine facility inspections to assess compliance. The Agency will increase its emphasis on developing inspection targeting mechanisms, formalizing EPA/State enforcement agreements, and developing selected administrative and judicial penalty cases against violators identified through inspections, tips, and complaints to support compliance verification activities.

The program will continue to assist state and local governments in updating and improving their emergency response plans. The Agency will update emergency planning guidance, review and modify instructor training programs for state and local groups, develop and present workshops on chemical hazard assessment, and develop simulation exercises to test the plans. EPA will develop guidance materials to assist states and localities in interpreting community right-to-know reporting information, and will continue to provide assistance to Indian tribes as they implement Title III programs on Indian lands. The Agency will also continue to evaluate chemicals against the extremely hazardous substances list, issue guidance on communicating risk, and manage information generated by Title III Sections 311/312/313 reporting thresholds. Finally, EPA will continue to receive, process, and evaluate Title III trade secrecy claims.

1990 Program

The Agency is allocating a total of $6,941,800 supported by 32.0 total workyears, of which $2,628,300 is from the Salaries and Expenses appropriation and $4,313,500 is from the Abatement, Control and Compliance appropriation.

In 1990, the Agency is providing support to state and local governments in both emergency response planning and implementation activities. Since most of the Local Emergency Planning Committees responded to the 1989 statutory deadline to complete their initial emergency response plans, the Agency is providing states and priority area communities with guidance, technical assistance, and training to review, test, and update their plans. EPA is working with communities that do not yet have approved emergency response plans.

The Agency is beginning to conduct compliance inspections, field investigations, and cooperative enforcement projects with states. The Agency is identifying violators through these processes and is developing administrative enforcement cases to address the identified violations. EPA expects that Regions may handle thirty to fifty cases nationwide in 1990.

The Agency continues to evaluate chemicals against the additional criteria for the extremely hazardous substances list and is beginning a rulemaking action related to physical hazards that will continue into 1991. EPA is evaluating Title III Section 311/312 (community right-to-know) reporting thresholds, and will issue final regulations establishing threshold quantities. The Agency is also continuing to receive, process, and evaluate Title III trade secrecy claims. EPA is completing the final rules for implementing the Title III Indian policy. Finally, the Agency is planning a number of risk communication projects and activities to assist state, local, and tribal governments in interpreting Title III information. These projects will better enable the public to understand the risks involved with hazardous chemicals.

1989 Program

In 1989, the Agency obligated a total of $4,011,000 and 28.9 total workyears for this program, of which $2,087,300 was from the Salaries and Expenses appropriation and $1,923,700 was from the Abatement, Control and Compliance appropriation.

The Agency proposed regulations for implementing various sections of Title III, including rules for implementing Title III on Indian lands; two rules concerning the designation of extremely hazardous substances as CERCLA hazardous substances and adjusting their reportable quantities; and a proposed rule, followed by an interim final rule, on the community right-to-know threshold requirements.

In addition, EPA assisted state and local authorities in planning emergency response programs. The Agency published guidance on flammables and explosives, developed and presented training on the Technical Guidance for Hazards Analysis and distributed a publication highlighting Title III success stories. A program was also initiated to involve the medical community in the Title III emergency planning process.

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HAZARDOUS WASTE
Hazardous Waste Enforcement

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
				(DOLLARS IN THOUSANDS)		
PROGRAM						
Hazardous Waste Enforcement						
Salaries & Expenses		$20,006.8	$21,250.6	$21,424.9	$29,160.0	$7,735.1
Abatement Control and Compliance		$19,871.4	$21,094.9	$20,595.8	$31,426.7	$10,830.9
	TOTAL	$39,878.2	$42,345.5	$42,020.7	$60,586.7	$18,566.0
TOTAL:						
Salaries & Expenses		$20,006.8	$21,250.6	$21,424.9	$29,160.0	$7,735.1
Abatement Control and Compliance		$19,871.4	$21,094.9	$20,595.8	$31,426.7	$10,830.9
Hazardous Waste Enforcement	TOTAL	$39,878.2	$42,345.5	$42,020.7	$60,586.7	$18,566.0
PERMANENT WORKYEARS						
Hazardous Waste Enforcement		436.4	489.5	453.4	575.7	122.3
TOTAL PERMANENT WORKYEARS		436.4	489.5	453.4	575.7	122.3
TOTAL WORKYEARS						
Hazardous Waste Enforcement		459.6	489.5	480.8	575.7	94.9
TOTAL WORKYEARS		459.6	489.5	480.8	575.7	94.9

HAZARDOUS WASTE

Hazardous Waste Enforcement

Budget Request

The Agency requests a total of $60,586,700 supported by 575.7 total workyears for 1991, an increase of $18,566,000 and 94.9 total workyears from 1990. Of the request, $29,160,000 will be for the Salaries and Expenses appropriation and $31,426,700 will be for the Abatement, Control, and Compliance appropriation. This represents an increase of $7,735,100 for the Salaries and Expenses appropriation and an increase of $10,830,900 for the Abatement, Control, and Compliance appropriation.

HAZARDOUS WASTE ENFORCEMENT

1991 Program Request

The Agency requests a total of $60,586,700 supported by 575.7 total workyears for 1991, of which $29,160,000 will be for the Salaries and Expenses appropriation and $31,426,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $7,735,100 for Salaries and Expenses, an increase of $10,830,900 for Abatement, Control and Compliance, and an increase of 94.9 total workyears from the 1990 levels. The increase in dollars and total workyears will support the expanded workload associated with corrective action.

The level of corrective action activities will continue to grow at operating and environmentally significant closing facilities as more owner/operators initiate facility investigations, study possible remedies to releases and initiate interim or remedial measures to reduce the risk. The Agency will ensure that facilities requiring corrective action will be addressed on a risk-based priority system. Once facilities are selected for corrective action, appropriate methods for addressing these facilities will be chosen. These methods will generally include the permit/post-closure process or issuance of an administrative order. The Agency will oversee owners and operators to facilitate remedy selection and successful implementation. Headquarters will continue to offer training, including evaluation criteria to the Regions and the states in the selection of remedy process and in negotiation strategies.

The Agency will place increased emphasis on implementation of the land ban restrictions by increasing the number of inspections and oversight activity of small quantity generators. The Agency will develop policies to guide Regional and state inspections of newly regulated waste such as those covered under the organic toxicity characteristics rule and the hazardous waste fuel rule, as well as mixed waste, mining waste, and the wood preserving listings.

EPA will continue to institutionalize enforcement and inspection training and workshops. Through the use of interactive computer training and satellite-based training classes, the Resource Conservation and Recovery Act (RCRA)

Inspector Training Institute will continue to provide training to ensure a consistent inspection program. The inspectors' role in pollution prevention will be studied to determine if this function should be expanded to providing technical assistance to the regulated community.

The Agency will coordinate closely with the states to achieve a smooth implementation of the RCRA Information System (RCRIS), which emphasizes automated data transfer, wide accessibility, and standardized formats among the Regions, states, and Headquarters.

1990 Program

In 1990, the Agency is allocating a total of $42,020,700 supported by 480.8 total workyears, of which $21,424,900 is from the Salaries and Expenses appropriation and $20,595,800 is from the Abatement, Control and Compliance appropriation.

The Agency is developing inspection guidance and enforcement strategies for implementation of multi-media measures for disposal of hazardous waste. Guidance on the enforcement of new regulations on land disposal of the prohibited wastes as well as guidance for the detection of illegal disposal and special waste is being revised.

Increasingly, the Agency is focusing its corrective action resources to ensure that owner/operators are conducting facility investigations in compliance with the terms of permits and orders. The Agency is also monitoring the development of corrective measures plans to assure environmentally sound measures are proposed and implemented. EPA is giving priority for new facility investigations to environmentally significant closing and closed facilities as well as to permitted facilities.

The Agency is ensuring that state inspections are conducted biennially at all operating land disposal facilities and at closed land disposal and treatment and storage facilities, as required by policy and the expanding land ban regulations. Increased emphasis is being placed on grant guidelines to ensure a nationally consistent and effective state enforcement program, especially in the area of corrective action. The Agency is conducting annual inspections of state owned or operated treatment, storage, and disposal facilities as well as incinerator facilities. Facilities under an administrative order are receiving a follow-up inspection to ensure a return to compliance. The Agency is conducting additional inspections at commercial facilities to ensure that these facilities are managing off-site Superfund wastes in an environmentally safe manner.

1989 Accomplishments

In 1989, the Agency obligated a total of $39,878,200 supported by 459.6 total workyears, of which $20,006,800 was from the Salaries and Expenses appropriation, and $19,871,400 was from the Abatement, Control and Compliance appropriation.

Compliance monitoring and enforcement actions were taken against handlers that presented the greatest threat to human health and the environment. The facilities that had the greatest problems with releases or were in significant non-compliance were addressed by administrative and judicial enforcement actions. Inspections and follow-up enforcement actions for the surface impoundment retrofit deadline of November 1988 continued to take place. The states and EPA conducted 13,182 inspections of Federal, state and local facilities that store, treat or dispose of hazardous waste, and inspections of commercial land disposal and treatment facilities were conducted twice a year to ensure compliance with the Superfund Off-Site Policy. Through technical enforcement support and state program evaluations, the Agency ensured that the states took timely and appropriate enforcement actions, and in some instances, the Agency initiated enforcement actions, for a combined total of 1,227 administrative orders issued. The Agency also brought enforcement actions for violations of HSWA provisions for which states were not authorized.

Corrective action resources supported initial assessments, studies, and corrective action oversight of permitted or permit track facilities, as well as facilities that had been issued an administrative order. Facility assessments were conducted at 174 treatment and storage facilities that were scheduled to be permitted in 1990.

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PESTICIDES

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Salaries & Expenses	$41,938.7	$46,630.1	$45,366.7	$51,448.4	$6,081.7
Abatement Control and Compliance	$68,668.6	$53,577.5	$52,851.4	$50,538.7	-$2,312.7
Research & Development	$7,354.0	$6,724.6	$6,547.6	$8,085.6	$1,538.0
TOTAL, Pesticides	$117,961.3	$106,932.2	$104,765.7	$110,072.7	$5,307.0
PERMANENT WORKYEARS	796.4	993.3	957.3	1,091.7	134.4
TOTAL WORKYEARS	846.0	993.3	990.9	1,091.7	100.8
OUTLAYS	$87,286.2	$94,978.6	$97,548.0	$99,856.8	$5,308.8
AUTHORIZATION LEVELS	Authorization for the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Amendments of 1988 reauthorized this program at a level of $83,000.0 for 1989, $95,000 for 1990 and $95,000 for 1991.				

PESTICIDES

OVERVIEW AND STRATEGY

Pesticides can be both beneficial and hazardous substances. Pesticide products provide benefits to society, contributing to agricultural productivity and controlling human diseases, yet they are inherently hazardous since they are specifically formulated to be injurious to living target organisms and deliberately introduced into the environment for that purpose.

EPA's authority to regulate pesticides is set forth in two statutes. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) governs the licensing or registration of pesticide products. Sections 408 and 409 of the Federal Food, Drug and Cosmetic Act (FFDCA) regulate the level of pesticide residues in raw and processed agricultural commodities.

FIFRA. Under FIFRA, all pesticides must be registered with EPA before they may be sold or distributed in commerce. EPA operates under an overall risk/benefit standard for pesticide registration. Pesticides must perform their intended function when used according to label directions, without posing unreasonable risks of adverse effects on human health or the environment. In making pesticide registration decisions, EPA is required to take into account the economic, social, and environmental costs and benefits of pesticide use. This is a task of enormous scope and complexity. Three billion pounds of pesticide active ingredients are used annually in this country, representing over 1,000 different active ingredients and 26,000 products.

Recent legislation has substantially amended FIFRA. The FIFRA Amendments of 1988 (signed into law on October 25, 1988) strengthened the Agency's authority in the following areas:

- The 1988 amendments accelerate the reregistration process for previously registered pesticides by requiring completion of this task within nine years. Pesticide registrants are responsible for supplying complete test data bases necessary for EPA to make pesticide reregistration decisions. Both industry and EPA must act within specific deadlines.

- Under the expedited registration provisions, which have short statutory deadlines, EPA is required to give accelerated consideration to applications for initial or amended registration of products which are similar to pesticides already registered with EPA.

- The law authorizes the collection of fees to support reregistration activities. Two kinds of fees are being collected: a one-time reregistration fee for each active ingredient, and an annual fee for registration maintenance to be paid for each registered product. These fees finance the FIFRA revolving fund which provides funding support for both staff and contractor personnel.

- EPA's responsibilities and funding requirements are substantially revised in the areas of storage and disposal of pesticides whose registrations have been suspended and cancelled. The law also places limitations on the availability of funding to indemnify certain owners of pesticides whose registrations have been suspended and cancelled.

FFDCA. Under the FFDCA, EPA sets tolerances, or maximum legal limits, for pesticide residues on food commodities marketed in the U.S. Before a pesticide can be registered under FIFRA for use on a food or feed crop, EPA must either establish a tolerance or, if appropriate, grant an exemption from the tolerance requirement.

In cooperation with other EPA offices, the pesticide program will undertake initiatives to address pollution prevention and the growing concern for food safety. The Agency will also augment the 1990 initiative to build Regional/state capabilities to protect ground water, workers exposed to pesticides, and endangered species, and implement revised Certification and Training (C&T) regulations.

In addition, EPA will continue to place high priorities on implementing the 1988 FIFRA amendments, continuing a commitment to ensure that regulatory decisions are based on the best available science, and continuing programs that emphasize risk reduction and safer pesticides.

The Agency's 1991 pesticide regulation program includes the following elements: 1) registration of new products and control of pesticide residues in the food chain, 2) review and reregistration of existing products, 3) encouragement of correct uses of pesticides, 4) the enforcement of pesticide regulations, 5) research and development to support and improve EPA's ability to evaluate the risks and benefits of pesticides, and 6) consulting services.

1. Registration Activities

FIFRA and FFDCA authorize EPA to set the terms and conditions of pesticide registration, marketing, and use. Under the registration program, new pesticide products are registered on the basis of data reviewed by Agency scientists, and current registrations are amended to add new uses and/or new formulations. Manufacturers are required to conduct a full range of health and environmental testing before marketing their new products. This testing uses sophisticated methodology and techniques, enabling the Agency to more accurately determine the potential for ground-water contamination, residues on food or feed, worker and applicator exposure, environmental risks, and chronic and acute health hazards. In order to reduce the level of risk associated with use of approved chemicals, EPA may restrict the use of these chemicals to trained, certified applicators; and prescribe label precautions, special packaging requirements, and application directions, including prescribed intervals between application and harvest or worker reentry into the fields.

The registration program also includes special registration and tolerance-setting activities. The special registration program continues to perform an auxiliary function by permitting certain uses of unregistered pesticide for experimental purposes and emergency pest situations. It also provides oversight and guidance to state registration and experimental use permit functions. The tolerance program establishes safe and enforceable maximum permissible residue levels (or, in some instances, exemptions from tolerance requirements) for both active and inert pesticide ingredients in or on raw agricultural commodities and processed foods.

Special emphases for 1991 include (1) giving high priority to implementing the FIFRA amendments of 1988, which requires expedited consideration of applications for registrations of products which are similar to pesticides already registered, (2) continuing to give priority consideration to newer, safer chemicals and uses which may replace more hazardous chemicals and uses, (3) giving special attention to biochemical and microbial agents, and (4) evaluating impacts on ground water, workers, and endangered species during registration reviews.

2. Generic Chemical Review (including Reregistration)

The registrations of the majority of existing pesticide chemicals are supported by data bases which the Agency believes should be updated to today's more advanced scientific standards to support the required determination that "no unreasonable adverse effects" are presented by a specific pesticide. The Generic Chemical Review program is designed to remedy this problem by requiring the upgrading of the scientific data base supporting registrations, reviewing available data about each chemical, and formulating scientifically based regulatory positions to guide the modification, cancellation, or reregistration of existing products and the registration of new products. The 1988 FIFRA amendments contain provisions for a greatly accelerated five-phase reregistration program, expedited processing of certain types of registration applications, a system for collecting and administering fees, and significant revisions to the indemnification and disposal program for pesticides suspended and cancelled after enactment of the 1988 amendments. The fees mandated by these amendments are to be used to supplement appropriated funds to carry out reregistration and expedited processing.

The Generic Chemical Review program contributes to the safety of the food supply, through the reregistration program and special reviews, in which pesticides suspected of causing unreasonable adverse effects undergo intensive risk/benefit analysis, which may result in changes to the terms and conditions of their use or cancellation of their registration.

Highlights of the 1991 program include:

- The Food Safety Initiative, begun in 1990, will be continued in 1991. It will include developing better scientific data on special tolerance and residue issues, conveying scientific information on risks to the public in understandable terms, and using improved risk information in regulatory decisions. This initiative will strengthen EPA's ability to make decisions on pesticides based on scientific risk assessments, and educate the public on the reasons for these decisions.

- The completion of the National Pesticide Survey will provide data to be used to refine the Agricultural Chemicals in Ground-Water Strategy. The Strategy will be used to evaluate approaches to protecting ground water at the state and Regional level.

- The disposal program will continue safe storage of stocks of 2,4,5-T/Silvex. Disposal will be initiated after a facility is permitted and available to the EPA to accept pesticide stocks for incineration.

- o The Agency is also proposing legislation to reinstate collecting fees for Pesticides Registration of the start of FY 1991.
- o Five pollution prevention projects will be funded as part of the EPA wide program. They will address ground-water contamination in corn growing areas, inert ingredients in pesticides, a hazard index for the Chesapeake Bay watershed, a decision support system applicable to ground-water problems, and bioregulation.
- o EPA will continue to give high priority to implementation of the 1988 FIFRA amendments, including the accelerated reregistration program, expedited processing of certain types of registration applications, collecting fees and administering the revolving fund.

3. Pesticides Program Implementation

Under this program EPA promotes the correct uses of pesticides. To achieve this goal EPA sets up cooperative agreements with State Lead Agencies to certify applicators to use Restricted Use Pesticides. EPA provides grants to the states to support this activity. Certification grants help support 53 applicator certification programs in participating states and territories and Federally administered programs in Colorado and Nebraska. EPA also has an interagency agreement with USDA to provide training to pesticide applicators by working through State Cooperative Extension Services (SCES).

After publication of revised C&T Regulations, which will strengthen the C&T program in the areas of record keeping, training, continuing education, and supervision of applicators, states will begin implementation.

In 1991, the Agency will continue the initiative begun in 1990, to place emphasis on building Regional/state capabilities to address the areas of protecting ground water, workers occupationally exposed to pesticides, endangered species, and strengthened C&T programs. States, with the guidance and assistance of the Regional offices, will develop and implement management strategies tailored to the particular circumstances in the states. Elements of the management strategies include: outreach, monitoring, development of training materials, and coordination with the C&T Program.

4. Pesticides Enforcement

The enforcement provisions of FIFRA are carried out primarily through the cooperative efforts of the states and territories, under a program of Federal-state cooperative enforcement agreements established with EPA. Participating states and territories conduct use inspections, inspect pesticide-producing establishments, maintain marketplace surveillance, and inspect dealers and users of restricted-use pesticides. In most instances in which violations are detected, the states and territories develop and prosecute enforcement cases as appropriate. In limited numbers of cases, states and territories may refer cases to EPA for action. The Agency encourages the states and territories to design and operate their enforcement programs so as to place greatest emphasis upon compliance with the use provisions of FIFRA, thereby producing the greatest environmental benefit. The Agency will continue to support and manage these cooperative efforts in 1991.

The Agency conducts Federal pesticides compliance monitoring programs in cases in which states or territories are unable or unwilling to support comprehensive compliance monitoring programs of their own. Federal programs in such instances include use investigations, import and export surveillance, and the preparation and prosecution of enforcement cases. Other activities that are exclusively the responsibility of the Agency include providing technical and compliance assistance to the states, the regulated community and the public, and operating an automated data system which maintains information on compliance inspections, enforcement actions, and pesticide production. In 1991, the Agency will also emphasize such areas as ground-water contamination, farmworker protection, development of state enforcement response policies under FIFRA Sections 26 and 27, and tracking and enforcement of compliance with pesticide registration requirements.

5. Research and Development

The FY 1991 Office of Research and Development (ORD) request for pesticides research and development will continue to support the Office of Pesticides Programs (OPP) by performing research in the areas of test method development and validation; biomarkers, dosimetry and extrapolation; exposure monitoring; environmental engineering and technology; ecology (both fate and transport and risk assessment); and biotechnology. In addition, ORD will continue to provide technical support to OPP in exposure assessment and monitoring procedures and risk assessment methodologies for oncogenicity, mutagenicity and reproductive and developmental toxicity. New research will be performed in the areas of ecological risk, pollution prevention and biotechnology.

6. Consulting Services

Consulting services are utilized by the Agency to support the Scientific Advisory Panel which, in accordance with section 25(d) of FIFRA, provides comments, evaluations and recommendations on actions and regulations proposed by the Agency. By using these services, which are funded from the Salaries and Expenses appropriation, the Agency can ensure that its regulatory program continues to be based on sound science.

PESTICIDES

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase+ Decrease- 1991 vs. 1990
PROGRAM ACTIVITIES				
Incremental Outputs				
Special Review Decisions.....	9	13	13	---
New Chemical and Biochemical/ Microbial Agent Reviews....	321	330	330	---
Old Chemical Reviews........	5,290	3,850	3,850	---
Amended Registration Reviews....................	8,828	4,560	4,560	---
New Use Reviews.............	335	300	300	---
Emergency Exemption Reviews....................	404	250	250	---
Experimental Use Permit Reviews....................	309	400	400	---
24(c) State Registration Reviews....................	890	475	475	---
Temporary Tolerance Petition Reviews...........	77	150	150	---
Tolerance Petition Reviews....................	444	475	475	---
Inert Ingredient Reviews....................	7	60	60	---
Producer Establishment Inspections a/.............	1,594	2,509	2,779	+270
Use/Reentry and Experimental Use Observations a/........	12,843	18,829	19,369	+540
Marketplace Investigations a/..........	5,947	4,035	4,305	+270
Import Inspections a/.......	433	475	4,975	+4,500

PESTICIDES (continued)

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase+ Decrease- 1991 vs. 1990
PROGRAM ACTIVITIES				
Incremental Outputs				
State Applicator License and Record Inspections.....	7,130	8,200	8,450	+250
State Dealer Record Inspections.........	3,981	4,450	4,600	+150
State Disposal, Storage, Transportation, and Recall Inspections................	---	---	5,000	+5,000
Federal Laboratory Inspections................	47	80	80	---
Test Study Audits...........	219	437	412	-25
Registration Standard Guidance Packages Established................	14	---	---	---
Reregistration Standards......	9	10	50	+40

a/ Includes both Federal and State enforcement activities

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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PESTICIDES
Pesticides Research

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM					
Scientific Assessment - Pesticides					
Salaries & Expenses	$129.8	$144.3	$142.4	$296.5	$154.1
Research & Development	$1.2				
TOTAL	$131.0	$144.3	$142.4	$296.5	$154.1
Monitoring Systems & Quality Assurance Pesticides					
Salaries & Expenses	$370.4	$349.1	$344.5	$480.5	$136.0
Research & Development	$918.8	$942.4	$916.5	$961.3	$44.8
TOTAL	$1,289.2	$1,291.5	$1,261.0	$1,441.8	$180.8
Health Effects - Pesticides					
Salaries & Expenses	$2,140.7	$2,295.4	$2,210.2	$2,577.2	$367.0
Research & Development	$1,620.9	$1,789.8	$1,729.1	$1,976.3	$247.2
TOTAL	$3,761.6	$4,085.2	$3,939.3	$4,553.5	$614.2
Environmental Engineering And Technology - Pesticides					
Salaries & Expenses	$153.8	$114.0	$124.6	$204.9	$80.3
Research & Development	$1,988.5	$406.7	$384.3	$138.0	-$246.3
TOTAL	$2,142.3	$520.7	$508.9	$342.9	-$166.0
Environmental Processes & Effects - Pesticides					
Salaries & Expenses	$3,113.7	$3,802.0	$3,242.4	$3,761.4	$519.0
Research & Development	$2,824.6	$3,585.7	$3,517.7	$5,010.0	$1,492.3
TOTAL	$5,938.3	$7,387.7	$6,760.1	$8,771.4	$2,011.3
TOTAL:					
Salaries & Expenses	$5,908.4	$6,704.8	$6,064.1	$7,320.5	$1,256.4
Research & Development	$7,354.0	$6,724.6	$6,547.6	$8,085.6	$1,538.0
Pesticides Research TOTAL	$13,262.4	$13,429.4	$12,611.7	$15,406.1	$2,794.4
PERMANENT WORKYEARS					
Scientific Assessment - Pesticides	1.4	1.5	1.5	1.5	0.0
Monitoring Systems & Quality Assurance Pesticides	5.8	5.7	5.7	5.2	-.5
Health Effects - Pesticides	32.6	39.5	39.5	39.5	0.0

PESTICIDES
Pesticides Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Environmental Engineering And Technology - Pesticides	2.3	2.0	2.0	1.1	-.9
Environmental Processes & Effects - Pesticides	54.9	62.7	60.7	62.7	2.0
TOTAL PERMANENT WORKYEARS	97.0	111.4	109.4	110.0	.6
TOTAL WORKYEARS					
Scientific Assessment - Pesticides	1.4	1.5	1.5	1.5	0.0
Monitoring Systems & Quality Assurance Pesticides	6.0	5.7	5.7	5.2	-.5
Health Effects - Pesticides	38.8	39.5	39.5	39.5	0.0
Environmental Engineering And Technology - Pesticides	2.7	2.0	2.0	1.1	-.9
Environmental Processes & Effects - Pesticides	59.6	62.7	60.7	62.7	2.0
TOTAL WORKYEARS	108.5	111.4	109.4	110.0	.6

PESTICIDES

Pesticides Research

Principal Outputs by Objective

Objective 1: Develop and Validate Test Methods for FIFRA Studies

1991: o Develop in-vitro neurotoxicology test methods for the identification and characterization of neurotoxic pollutants (Health).

o Report on teratogenic responses in *Menidia berryllina* embryos for environmental assessment: Estuarine, freshwater and hazardous waste sites (Environmental Processes).

1990: o Report on the immunotoxicology methods development and validation in the rat (Health).

1989: o Assessment of neurotoxicity in workers occupationally exposed to organophosphorus pesticides: A neurobehavioral and biochemical study (Health).

Objective 2: Perform Health Research on Biological Markers, Dosimetry and Extrapolation

1991: o Development of neurobehavioral testing strategy for use in Pesticide Guidelines (Health).

o Report on biomarkers and dosimetry research activity for exposure monitoring (Monitoring).

Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation

1991: o Role of estuarine sediments in the biodegradation of anthropogenic chemicals (Environmental Processes).

o Validation of pesticide effects on fish growth under field exposure conditions (Environmental Processes).

1990: o Report on field censusing techniques for large scale avian field studies (Environmental Processes).

o Fish reproductive success studies for littoral enclosures (Environmental Processes).

o Report on sorption of water soluble ionic pesticides to soils and sediments (Environmental Processes).

1989: o Final Doughtery Plain report including pesticide groundwater threat assessment method (Environmental Processes).

Objective 4: Perform Engineering Research in Support of FIFRA

1991: o Summary report of assistance activities to OPP for the pesticides: EDB, Dinoseb and Silvex (Engineering).

o Guidance manual for selecting protective clothing for agriculture pesticide operations (Engineering).

1990: o Report on the effects of co-firing chlorinated wastes with high nitrogen compounds on NOx emissions (Engineering).

o A review of peer-reviewed literature/data for the treatability of pesticides from water, wastewater, and soils (Engineering).

o Release of a protective-clothing training video visibly showing the dermal exposure possible when proper protective clothing is not used during outdoor handling/use operations (Engineering).

1989: o Report on the performance results of a pilot-scale trial burn of Dinoseb pesticide formulations (Engineering).

o Report on performance results of full-scale incineration operations of EDB inventory disposal (Engineering).

o Report providing data on greenhouse-applicator worker exposure to several pesticides and the penetration resistance of their protective clothing to these compounds (Engineering).

Objective 5: Perform Exposure Monitoring Research

1991: o Pesticides exposure to urban and suburban pesticides in children (Monitoring)

Objective 6: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents

1991: o Report on efficacy of enclosed multi-species test systems in determining effects of microbial pest control agents in non-target species (Environmental Processes).

o Report on exposure of field applications of biological agents used as agricultural pesticides (Monitoring).

1990: o Synthesis report on test methods for BCAs to avians (Environmental Processes).

o Laboratory methods for appraising the safety of a microbial pest control agent in freshwater systems (Environmental Processes).

1989: o Report on dispersal of BCAs released into the atmosphere (Environmental Processes).

o Report on protocols for exposing freshwater fish and invertebrates to a fungal pest control agent (Environmental Processes).

o Report on the evaluation of mammalian cell culture test protocols for viral pesticide agents (Health).

Objective 7: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols

1990: o Users manual for updated TEAM Model (Environmental Processes).

o Final report on resistance and resilience of pond ecosystems to toxicant stress (Environmental Processes).

1989: o Final report on biological data base for risk assessment (Environmental Processes).

o Report on effects of xenobiotics on the macroinvertebrates in a seagrass community ecosystem (Environmental Processes).

Objective 8: Provide Support Services for FIFRA Activities

1991: o Annual report on the Pesticides and Industrial Chemicals Repository (Monitoring).

1990: o Annual report on the Pesticides and Industrial Chemicals Repository (Monitoring).

PESTICIDES

Pesticides Research

Budget Request

The Agency requests a total of $15,406,100 supported by 110.0 total workyears for 1991, an increase of $2,794,400 and 0.6 total workyears from 1990. Of the request, $7,320,500 will be for the Salaries and Expenses appropriation and $8,085,600 will be for the Research and Development appropriation, an increase of $1,256,400 and $1,538,000, respectively.

Program Objectives

The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetics Act (FFDCA) require the regulation of pesticide use to avoid unreasonable adverse effects to public health and the environment. The research program improves our understanding of how pesticides interact with human activities and the environment, to assure that their use minimizes damage from pests, while maximizing the protection of man's food, health and the environment.

Objective 1: Develop and Validate Test Methods for FIFRA Studies. This research develops and validates environmental and health test methods for use by industry to assist them in meeting pesticide registration requirements and enforcement responsibilities under Sections 3 and 26 of FIFRA.

Objective 2: Perform Health Research on Biological Markers, Dosimetry, and Extrapolation. This research develops methods for extrapolating from high to low doses between mammalian species, evaluates dermal penetration of pesticides and examines chemical structure activity relationships. Biological markers are evaluated and tested to determine their potential use in exposure monitoring studies. This information is used by the Agency to evaluate pesticide data submitted by industry as part of the registration and re-registration process.

Objective 3: Perform Ecological Research Including Transport, Fate and Field Validation. This research validates laboratory studies by quantifying pesticide effects through field testing in order to evaluate mortality, reproduction and recovery potential of fishes, invertebrates, birds and other organisms. This approach allows comparison between laboratory studies and actual field results. This research also investigates the movement of pesticides through the environment in order to determine the eventual disposition of pesticides in the environment.

Objective 4: Perform Engineering Research in Support of FIFRA. This research provides worker-safety and disposal information for the handling, application, and disposal of pesticides, and to provide the technical basis to support the Office of Pesticides Programs' (OPP) regulatory needs under FIFRA.

Objective 5: Perform Exposure Monitoring Research. This research develops equipment and specialized monitoring protocols and procedures for total human exposure monitoring, pesticide exposure to characterize sources, and routes of exposure for national pesticide monitoring efforts.

Objective 6: Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. This research evaluates the effects of microbial and biochemical pest control agents (MBPCAs) and products of biotechnology on humans and the environment to support registration activities of OPP.

Objective 7: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. This research provides the means to determine the risk posed to actual ecosystems by environmental pollutants by determining critical endpoints and devising mathematical models in order to predict impacts. This research will provide risk assessment protocols and guidelines for use in determining potential effects to terrestrial and aquatic ecosystems.

Objective 8: Provide Support Services for FIFRA Studies. This activity provides support to risk and exposure assessments by providing quality assurance materials and reference compounds for pesticide residue analyses.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $296,500 supported by 1.5 total workyears for this program, all of which will be in the Salaries and Expenses appropriation. This represents an increase of $154,100 which reflects increased personnel and support costs. There is no change in total workyears.

Provide Support Services for FIFRA Activities. The Scientific Assessment program will continue to prepare and review health risk assessments for carcinogenicity, mutagenicity, adverse reproductive/ developmental effects and exposure to support OPP implementation of FIFRA Section 3 provisions for evaluating risk from pesticides use. Support will also be provided for laboratory data audits.

1990 Program

In 1990, the Agency is allocating a total of $142,400 supported by 1.5 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

This research program will continue to prepare and review health risk assessments and provide support for laboratory data audits.

1989 Accomplishments

In 1989, the Agency obligated a total of $131,000 supported by 1.4 total workyears for this program, of which $129,800 was from the Salaries and Expenses appropriation and $1,200 was from the Research and Development appropriation.

In 1989, major activities included support for laboratory data audits, consultation and review of EBDC/ETU assessments and data reviews on bromoxynil, propargate, larvadex, and melesystox.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $1,441,800 supported by 5.2 total workyears for this program, of which $480,500 will be in the Salaries and Expenses appropriation and $961,300 will be in the Research and Development appropriation. This represents an increase of $136,000 in the Salaries and Expenses appropriation and $44,800 in the Research and Development appropriation. There is a decrease of 0.5 total workyears. The increase in the Research and Development appropriation is due to new pollution prevention research on ground water contamination, establishing a pesticide index and registry for the Chesapeake Bay, and the reduction of pesticide applications through bioregulation. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The decrease in total workyears reflects a realignment of resources to support higher priorities within the Agency.

Develop and Validate Test Methods for FIFRA Studies. Monitoring methods and strategies will be developed for determining the effect of agricultural pesticide usage on the quality of surface and ground water systems. Research will focus on identifying factors for ground water susceptibility.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Biological markers will be evaluated as sensitive indicators of exposure. Candidate biological markers will be selected. Laboratory studies will estimate the capability of these techniques to serve as indicators of exposure.

Perform Exposure Monitoring Research. This research will utilize total human exposure monitoring of pesticides to assess exposure of lawn and garden pesticides. Emphasis will be on exposure to toddlers and children.

Perform Research On Biotechnology and Microbial and Biochemical Pest Control Agents. Protocols for use in regulatory decision-making concerning identification, fate and survival of biological agents, including recombinant DNA will be developed.

Provide Support Services for FIFRA Activities. Quality assurance in sample collection and analysis procedures will be provided. This will include oversight of the Pesticides Repository, research on the selection of representative samples, and how to optimize instrument settings for data analysis.

1990 Program

In 1990, the Agency is allocating a total of $1,261,000 supported by 5.7 total workyears for this program, of which $344,500 is from the Salaries and Expenses appropriation and $916,500 is from the Research and Development appropriation.

In 1990, a coordinated research effort will identify and test biological markers of exposure to priority pesticide chemicals. Protocols and methodologies for total human exposure monitoring for pesticides will be provided. Research will emphasize dermal exposure in children. Efforts will focus on privatizing the Pesticide Repository.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,289,200 supported by 6.0 total workyears for this program, of which $370,400 was from the Salaries and Expenses appropriation and $918,800 was from the Research and Development appropriation.

In 1989, the final portion of the Non-Occupational Pesticide Exposure Study (NOPES) on exposure to common household pesticides was completed. Candidate biological markers were selected for further study. Efforts were initiated to privatize the Pesticide Repository.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $4,553,500 supported by 39.5 total workyears for this program, of which $2,577,200 will be for the Salaries and Expenses appropriation and $1,976,300 will be for the Research and Development appropriation. This represents an increase of $367,000 in the Salaries and Expenses appropriation and $247,200 in the Research and Development appropriation. There is no change in total workyears. The Salaries and Expenses appropriation increases reflect increased personnel and support costs. The increase in the Research and Development appropriation will be used to fund expanded research in biotechnology.

Develop and Validate Test Methods for FIFRA Studies. Health effects research will develop and refine bioassays for the detection of adverse developmental, reproductive, mutagenic, carcinogenic, neurotoxic and immunotoxic effects for use by industry as part of FIFRA Section 3 evaluation of risks.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Research will develop models to assess health risk assessment predictability and will focus on methods development for extrapolating results of animal toxicity studies into risk estimates for humans. Studies will include the comparison of in-vivo and in-vitro methods for estimating pesticide dermal absorption, metabolic differences between species, and investigating the relationship between maternal health and fetal susceptibility to teratogenic outcome. These models will assist in the evaluation of pesticides data submitted as part of the registration and re-registration process.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. To support microbial pesticide registration, testing protocols will be developed for detecting, identifying, and monitoring microbial agents in mammalian cells. Research will evaluate FIFRA Subdivision M infectivity guidelines for microbial agents, and detecting health effects from exposure to genetically engineered pesticides.

1990 Program

In 1990, the Agency is allocating a total of $3,939,300 supported by 39.5 total workyears for this program, of which $2,210,200 is from the Salaries and Expenses appropriation and $1,729,100 is from the Research and Development appropriation.

In 1990, data on the effects of microbial and biochemical pest control agents and genetically engineered pesticides will be provided. Methods to detect adverse alterations in the reproductive processes in animals to allow for more accurate evaluations of reproductive development and function are being developed. Research to develop animal models to assess health risks caused by pesticides is being performed.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,761,600 supported by 38.8 total workyears for this program, of which $2,140,700 was from the Salaries and Expenses appropriation and $1,620,900 was from the Research and Development appropriation.

In 1989, activities the included assessment of neurotoxicity in workers occupationally exposed to organophosphorus pesticides, and an evaluation of mammalian cell test protocols for viral pesticide agents.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $342,900 supported by 1.1 total workyears for this program, of which $204,900 will be in the Salaries and Expenses appropriation and $138,000 will be in the Research and Development appropriation. This represents an increase of $80,300 in the Salaries and Expenses appropriation, a decrease of $246,300 in the Research and Development appropriation and a decrease of 0.9 total workyears. The decreases reflect the completion of a significant portion of research on the destruction/disposal technologies for indemnified pesticides and the evaluation of protective clothing for agricultural workers. The Salaries and Expenses appropriation increases reflect increased personnel and support costs.

Perform Engineering Research in Support of FIFRA. States and other Federal agencies will be assisted in evaluating proposed pesticide disposal and treatment methods. To support FIFRA-mandated container recycling programs, field-test methods for demonstrating adequate clean-up will be developed. A database to support pesticide treatment is being updated. Protective glove-selection protocols based on permeation data and field-use effectiveness of protective clothing for agricultural workers will be published.

1990 Program

In 1990, the Agency is allocating a total of $508,900 supported by 2.0 total workyears for this program, of which $124,600 is from the Salaries and Expenses appropriation and $384,300 is from the Research and Development appropriation.

In 1990, guidance on the use of protective apparel for commercial users of agricultural pesticides will be completed. Research on disposal/destruction technologies including container re-use capability continues.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,142,300 supported by 2.7 total workyears for this program, of which $153,800 was from the Salaries and Expenses appropriation and $1,988,500 was from the Research and Development appropriation.

In 1989, a report on greenhouse workers exposure to several of their most used pesticides and the penetration resistance of their protective clothing was published.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $8,771,400 supported by 62.7 total workyears for this program, of which $3,761,400 will be for the Salaries and Expenses appropriation and $5,010,000 will be for the Research and Development appropriation. This represents increases of $519,000 and $1,492,300, respectively, and an increase of 2.0 total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The increase in the Research and Development appropriation and workyears will support new research in pollution prevention, eco-risk assessments and additional biotechnology research.

Develop and Validate Test Methods for FIFRA Studies. Ecological effects studies will develop and revise test methods according to the margin of error attributed to environmental influences. Methods will be devised to investigate chemical, toxicological and teratogenic properties. This research will provide standardized testing or monitoring protocols and a variety of test organisms and life stages as bioindicators for testing pesticide hazard and risk.

Perform Ecological Research Including Transport, Fate and Field Validation. Ecological field and laboratory studies will be developed and validated for standardized testing and monitoring protocols to predict pesticide transport, degradation, exposure, and fate in marine organisms. Studies include life cycle tests and physiological measurements to predict toxicity, and to determine factors controlling chronic and acute testing results.

Perform Research on Biotechnology and Microbial and Biochemical Pest Control Agents. Research will develop and improve bioassays for determining effects of microbial pest control agents on non-target organisms. Parameters such as routes of exposure, detection methods, identification schemes, virulence, toxicity, and infectivity are evaluated through bioassays. To fully characterize potential environmental consequences of altered microbial pest control agents (MPCAs) and genetically altered biological control agents (BCAs), research needs to be conducted to better understand the movement, survival and mode of action on receptor organisms. Research results will support modifications of testing protocols for Subpart M guidelines used by industry to provide registration data.

Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. Mathematical models, support data bases, and protocols for assessing ecosystem exposure and hazards will be arranged in a database structure. This will accelerate completion of ecological risk assessments. Pesticide release, transport, and transformation parameters will be adapted to dependent ecological models. Standardized descriptors for use in risk assessment will be developed for biotic effects of pesticides on populations, communities, and ecosystems.

1990 Program

In 1990, the Agency is allocating a total of $6,760,100 supported by 60.7 total workyears for this program, of which $3,242,400 is from the Salaries and Expenses appropriation and $3,517,700 is from the Research and Development appropriation.

In 1990, this research program includes development of test methods in support of FIFRA guidelines, performs research on transport, fate and field validation, the effects of biological pest control agents, and develop risk assessment techniques.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,938,300 supported by 59.6 total workyears for this program, of which $3,113,700 was from the Salaries and Expenses appropriation and $2,824,600 was from the Research and Development appropriation.

In 1989, the final Doughtery Plains report including pesticide groundwater threat assessment methodology was completed.

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PESTICIDES
Registration, Special Registration & Tolerances

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Registration, Special Registration, and Tolerances					
Salaries & Expenses	$13,199.5	$13,967.5	$13,640.6	$14,900.8	$1,260.2
Abatement Control and Compliance	$2,980.2	$2,970.0	$2,932.1	$3,016.7	$84.6
TOTAL	$16,179.7	$16,937.5	$16,572.7	$17,917.5	$1,344.8
TOTAL:					
Salaries & Expenses	$13,199.5	$13,967.5	$13,640.6	$14,900.8	$1,260.2
Abatement Control and Compliance	$2,980.2	$2,970.0	$2,932.1	$3,016.7	$84.6
Registration, Special Registration & Tolerances TOTAL	$16,179.7	$16,937.5	$16,572.7	$17,917.5	$1,344.8
PERMANENT WORKYEARS					
Registration, Special Registration, and Tolerances	247.3	265.9	254.5	265.9	11.4
TOTAL PERMANENT WORKYEARS	247.3	265.9	254.5	265.9	11.4
TOTAL WORKYEARS					
Registration, Special Registration, and Tolerances	264.1	265.9	265.9	265.9	0.0
TOTAL WORKYEARS	264.1	265.9	265.9	265.9	0.0

PESTICIDES

Registration, Special Registration, and Tolerances

Budget Request

The Agency requests a total of $17,917,500 supported by 265.9 total workyears for 1991, an increase of $1,344,800 and no change in total workyears from 1990. Of the request, $14,900,800 will be for the Salaries and Expenses appropriation and $3,016,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,260,200 in the Salaries and Expenses appropriation and an increase of $84,600 in the Abatement, Control and Compliance appropriation.

REGISTRATION, SPECIAL REGISTRATION, AND TOLERANCES

1991 Program Request

The Agency requests a total of $17,917,500 supported by 265.9 total workyears for this program, of which $14,900,800 will be for the Salaries and Expenses appropriation and $3,016,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,260,200 in the Salaries and Expenses appropriation, an increase of $84,600 in the Abatement, Control and Compliance appropriation, and no change in total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The increase in the Abatement, Control and Compliance appropriation reflects increased emphasis on new chemicals and groundwater protection.

In 1991, the Agency expects to conduct 330 reviews of new chemicals and biochemical/microbial agents, 3,850 reviews of old chemicals, 4,560 amended registration reviews, 300 new use reviews, and 475 tolerance petition reviews. The emphasis on processing new chemicals and new uses will be continued in 1991. This will permit more rapid entry of newer, safer chemicals into the market.

The Agency will continue to give special emphasis to ground-water protection including registrant-performed monitoring, more extensive use of environmental fate test data, geographical restrictions and restricted use classifications. These measures will help prevent future environmental clean-up problems.

Regional liaison will be enhanced by working closely with the Regional pesticide experts and other Regional staff to improve Regional and state understanding of national regulatory activities, and by obtaining their input on policies and reviews affecting their mission. This liaison will improve oversight of section 18 experimental use permit reviews and section 24(c) special local need programs. Certain problems and Regional and state issues, including container disposal and ground-water contamination, will be addressed at the Regional level.

To prevent circumvention of section 3 registration requirements, stringent criteria for granting section 18 exemptions will continue to be applied. These criteria include consideration of progress towards permanent registration and clarification of "emergency" and "significant economic loss." Headquarters will continue to work closely with the Regions and states to monitor emergency exemptions and special local needs. Special emphasis will continue to be placed on the regulatory implications of genetically engineered microbial pesticides (GEMP's) and necessary interagency coordination.

The Agency will continue to ensure that tolerances reflect the most current regulatory status of each active ingredient, including revocation of tolerances on cancelled pesticides and tolerance reassessments in conjunction with Reregistration reviews. The automated Tolerance Assessment System (TAS) will be used to determine estimates of dietary exposure to pesticide residues. Tolerance fees will increase to reflect increases in the General Schedule pay-scale.

The Agency is also proposing legislation to reinstate collecting fees for pesticides Registration at the start of FY 1991.

1990 Program

In 1990, the Agency is allocating a total of $16,572,700 supported by 265.9 total workyears for this program, of which $13,640,600 is from the Salaries and Expenses appropriation and $2,932,100 is from the Abatement, Control and Compliance appropriation.

In 1990, registration reviews are continuing to emphasize new chemicals and new uses to facilitate the rapid availability of new, potentially safer chemicals which may replace older, more hazardous ones still in use. An ongoing productivity initiative, planned to reduce the cost and time needed to review old chemicals and amendments while ensuring quality reviews, has been expanded to address the expedited processing provisions of the 1988 FIFRA amendments. Registration reviews continue to emphasize protection of ground-water, workers, and endangered species.

In 1990, state participation in the Emergency Exemption, Experimental Use Permit, and Special Local Needs programs is continuing to be enhanced through EPA guidance and close Federal/state cooperation. Continued special attention is being given to biochemical/microbial agents. The Agency is revising the section 5 experimental use permit regulations to provide sufficient oversight of the early testing of genetically engineered and nonindigenous microbial pesticides.

The TAS is operational for estimating dietary exposure to pesticide residues and continues to be updated and refined. Inerts of toxicological concern are listed on pesticide labels and will undergo data call-ins. Crop group tolerances continue to be used where applicable to reduce data requirements and efficiently deal with minor uses.

1989 Accomplishments

In 1989, the Agency obligated a total of $16,179,700 supported by 264.1 total workyears for this program, of which $13,199,500 was from the Salaries and Expenses appropriation and $2,980,200 was from the Abatement, Control and Compliance appropriation.

Through a productivity initiative begun in 1988, the Old Chemicals and Amendments review process was evaluated in an effort to reduce the cost and time needed to accomplish these activities while ensuring adequate quality of required reviews. This productivity initiative was expanded to address the expedited processing provisions of the 1988 FIFRA Amendments.

Under the authority of the 1988 FIFRA amendments, a new system of user fees was put into place, establishing a separate reregistration fee system and suspending collection of the registration fee. The new system, which provides revenue for the FIFRA revolving fund, is composed of separate maintenance and reregistration fees.

The continually updated, computer-based TAS was used for determining estimates of dietary exposure to pesticide residues. Crop group tolerances continued to be used where applicable to reduce data requirements and effectively deal with minor uses.

PESTICIDES
Generic Chemical Review

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Generic Chemical Review					
Salaries & Expenses	$16,793.7	$18,646.9	$18,115.6	$19,891.6	$1,776.0
Abatement Control and Compliance	$52,384.6	$25,593.2	$24,778.5	$15,418.0	-$9,360.5
TOTAL	$69,178.3	$44,240.1	$42,894.1	$35,309.6	-$7,584.5
TOTAL:					
Salaries & Expenses	$16,793.7	$18,646.9	$18,115.6	$19,891.6	$1,776.0
Abatement Control and Compliance	$52,384.6	$25,593.2	$24,778.5	$15,418.0	-$9,360.5
Generic Chemical Review TOTAL	$69,178.3	$44,240.1	$42,894.1	$35,309.6	-$7,584.5
PERMANENT WORKYEARS					
Generic Chemical Review	327.5	439.3	425.7	504.3	78.6
TOTAL PERMANENT WORKYEARS	327.5	439.3	425.7	504.3	78.6
TOTAL WORKYEARS					
Generic Chemical Review	338.2	439.3	439.3	504.3	65.0
TOTAL WORKYEARS	338.2	439.3	439.3	504.3	65.0

PESTICIDES

Generic Chemical Review

Budget Request

The Agency requests a total of $35,309,600 supported by 504.3 total workyears for 1991, a decrease of $7,584,500 from 1990. Of the request, $19,891,600 will be for the Salaries and Expenses appropriation, and $15,418,000 will be for the Abatement, Control and Compliance appropriation. This represents increase of $1,776,000 in the Salaries and Expenses appropriation and a decrease of $9,360,500 in the Abatement, Control and Compliance appropriation. This represents an increase of 65.0 total workyears from the Reregistration and Expedited Processing Revolving Fund and no increase in Salaries and Expenses workyears.

GENERIC CHEMICAL REVIEW

1991 Program Request

The Agency requests a total of $35,309,600 supported by 504.3 total workyears for this program, of which $19,891,600 will be for the Salaries and Expenses appropriation, and $15,418,000 will be for the Abatement, Control and Compliance appropriation. Total workyears will include 314.3 from the Salaries and Expenses appropriation and 190.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $1,776,000 in the Salaries and Expenses appropriation, a decrease of $9,360,500 in the Abatement, Control, and Compliance appropriation, no change in total Salaries and Expenses workyears, and an increase of 65.0 total workyears from the Reregistration and Expedited Processing Revolving Fund. The increase in Salaries and Expenses reflects increased personnel and support costs. The decrease in Abatement, Control, and Compliance reflects a reduction in the need to fund transportation, storage and disposal of remaining stocks of cancelled and suspended pesticides due to significant progress that will be achieved using funds appropriated in 1990.

For reregistration activities related to the 1988 FIFRA Amendments, resources will support 50 Reregistration Standards (RRS's), which represents an increase of 40 standards over the projected 1990 output. Additional workyears will be funded by the Reregistration and Expedited Processing Revolving Fund, created by the 1988 FIFRA Amendments.

Of the resources requested in 1991 for the Abatement, Control and Compliance appropriation, $4,000,000 will fund transportation, storage and disposal of cancelled and suspended pesticides. The Agency's responsibility to indemnify holders and bear the costs of disposal of cancelled and suspended pesticides will continue in 1991 for chemicals which were suspended and cancelled prior to the 1988 FIFRA Amendments. These funds will ensure the continued safe storage of national 2,4,5-T/Silvex stocks. Disposal of these stocks may commence in 1991 once a facility is permitted and available to the Agency for incineration of 2,4,5-T/Silvex.

As part of an Agency-wide program, the pesticide program will undertake five pollution prevention projects. The purposes of these projects will be to: (1) reduce surface and ground-water contamination and human health risks due to application of herbicides in major corn-producing states; (2) work with the Office of Research and Development (ORD) to develop a pesticides inerts strategy which formally addresses air pollution problems associated with volatile organic compounds; (3) work with ORD and Region 3 to develop and test the reliability of a pesticide hazard index to reduce the risk of pesticides in the Chesapeake Bay watershed; (4) work with ORD, the Regions, and states to develop a decision support system that will help states and local governments protect ground water from pesticides; and (5) support the ORD in developing information that would lead to a reduction in pesticide applications through the management of biological degradation processes.

Detailed follow-up studies of the National Pesticide Survey (NPS) data base will be initiated, following issuance of the December 1990 report. Other funds will support special ground-water projects.

1990 Program

In 1990, the Agency is allocating a total of $42,894,100 supported by 439.3 total workyears for this program, of which $18,115,600 is from the Salaries and Expenses appropriation and $24,778,500 is from the Abatement, Control and Compliance appropriation. Total workyears include 314.3 from the Salaries and Expenses appropriation and 125.0 from the Reregistration and Expedited Processing Revolving Fund.

The 1988 FIFRA Amendments require a large increase in the number of submissions from registrants. In 1990, registrants are responding to the four lists of active ingredients subject to reregistration (Phase I). In Phases II and III, EPA begins evaluation of preliminary data to identify data gaps. Much of this workload occurs in 1990. The substantial hiring and training program initiated as part of the implementation of the 1988 FIFRA Amendments is continuing in 1990. It is supported by maintenance and reregistration fees. Measures to upgrade and integrate current tracking systems are continuing, and additional ADP changes and improved capabilities are planned.

The Agency expects that 10 Reregistration Standards to be completed as work pertaining to the 1988 FIFRA Amendments continues. Funds from both base appropriations and the FIFRA revolving fund are utilized to accomplish these tasks. Thirteen Special Reviews are projected for 1990. Automated decision support systems, for assessing dietary exposure, are being enhanced to support this work.

Pesticide disposal program funds are being utilized for disposal of national dinoseb stocks and storage of 2,4,5-T/Silvex, pending the permitting of an incinerator for 2,4,5-T/Silvex disposal and the award of disposal contracts.

In 1990, the Agency is launching a major new program to build Regional and state capabilities to deal with problems of ground-water pollution, protect endangered species from pesticides, and promote the safety of pesticide applicators and agricultural workers. Resources for the Headquarters national program development and liaison function for this initiative are contained in the Generic Chemical Review program. EPA continues its long-term collaborative effort with the states and Federal agencies to integrate ground-water management programs, including addressing ground-water concerns in registration and reregistration actions. Worker Protection Standards for Agricultural Pesticides (40 CFR 170) governing pesticide-treated field reentry intervals, protective clothing, and label warnings, are scheduled to be published as a final regulation in 1990.

In 1990, resources are being redirected to a new food safety initiative, which addresses broader food safety concerns. This initiative will strengthen the Agency's ability to make decisions on pesticides based on scientific risk assessments, and educate the public on the basis for these decisions.

The National Pesticide Survey (NPS) is scheduled for completion in 1990 and the final report is scheduled for December 1990. Results of the NPS will be used to refine the Agency's Agricultural Chemicals in Ground Water Strategy and to evaluate further regulatory and state-specific approaches to protect drinking water from pesticide pollution.

1989 Accomplishments

In 1989, the Agency obligated a total of $69,178,300 supported by 338.2 total workyears for this program, of which $16,983,600 was from the Salaries and Expenses appropriation and $52,194,700 was from the Abatement, Control and Compliance appropriation. Total workyears included 306.8 from the Salaries and Expenses Appropriation and 31.4 from the Reregistration and Expedited Processing Revolving Fund.

The FIFRA Amendments of 1988 accelerate the reregistration process for previously registered pesticides and require EPA to give accelerated consideration to applications for initial or amended registration of products which are similar to pesticides already registered with EPA. The 1988 FIFRA Amendments require a large increase in the number of registrant submissions. A major hiring and training program was initiated in 1989 in order to meet the increased workloads posed by the amendments.

In 1989, 14 Registration Standards and 9 Reregistration Standards were established, and 9 Special Review decisions were reached. In addition, FIFRA Phase I-IV activities were begun in accordance with the 1988 FIFRA Amendments.

Work continued in 1989 on implementation of the Agency's October 1988 response to the National Academy of Sciences' (NAS) food additive study. The new policy modifies the "zero-risk" standard for pesticides that increase in concentration during food processing, by implementing a "negligible risk" standard, treating older pesticides by the same risk standards as new pesticides.

Comments of state, private and public interest groups were incorporated into the Agency's proposed Endangered Species Protection Program (ESPP) and efforts toward development of Worker Protection Standards continued.

The major 1989 activity in the pesticide disposal program was the preparation for disposal of nation-wide dinoseb stocks. A Dinoseb demonstration burn was conducted in August and September of 1989. All remaining stocks of ethylene dibromide (EDB) were incinerated in 1989.

Laboratory audits were conducted by the Agency or cooperatively with other agencies to ensure the development of high-quality test data and environmental effects of pesticides. In addition, use of Integrated Pest Management alternatives was encouraged in order to reduce levels of human and environmental exposure, typical of conventional pesticide use practices.

PESTICIDES
Pesticides Program Implementation

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Pesticides Program Implementation						
Salaries & Expenses		$987.0	$1,935.7	$1,994.6	$2,661.6	$667.0
	TOTAL	$987.0	$1,935.7	$1,994.6	$2,661.6	$667.0
Pesticides Program Implementation - Grants						
Abatement Control and Compliance		$3,978.1	$12,306.3	$12,149.0	$14,500.0	$2,351.0
	TOTAL	$3,978.1	$12,306.3	$12,149.0	$14,500.0	$2,351.0
TOTAL:						
Salaries & Expenses		$987.0	$1,935.7	$1,994.6	$2,661.6	$667.0
Abatement Control and Compliance		$3,978.1	$12,306.3	$12,149.0	$14,500.0	$2,351.0
Pesticides Program Implementation	TOTAL	$4,965.1	$14,242.0	$14,143.6	$17,161.6	$3,018.0
PERMANENT WORKYEARS						
Pesticides Program Implementation		20.0	44.4	40.6	54.2	13.6
TOTAL PERMANENT WORKYEARS		20.0	44.4	40.6	54.2	13.6
TOTAL WORKYEARS						
Pesticides Program Implementation		22.0	44.4	44.1	54.2	10.1
TOTAL WORKYEARS		22.0	44.4	44.1	54.2	10.1

PESTICIDES

Pesticides Program Implementation

Budget Request

The Agency requests a total of $17,161,600 supported by 54.2 total workyears for 1991, an increase of $3,018,000 and 10.1 workyears from 1990. Of the request, $2,661,600 will be for the Salaries and Expenses appropriation and $14,500,000 will be for the Abatement, Control, and Compliance appropriation, This represents an increase of $667,000 in the Salaries and Expenses appropriation and an increase of $2,351,000 in the Abatement, Control and Compliance appropriation from 1990.

PESTICIDES PROGRAM IMPLEMENTATION

1991 Program Request

The Agency requests a total of $2,661,600 supported by 54.2 total workyears for this program (formerly the Certification and Training (C&T) program), all of which will be for the Salaries and Expenses appropriation. This represents an increase of $667,000 for Salaries and Expenses and an increase of 10.1 total workyears. The increase in Salaries and Expenses reflects costs associated with the increase in workyears as well as increased personnel costs.

The 1991 request expands an initiative begun in 1990 to address increasing concerns about the pesticide threat to ground water, endangered species, and workers occupationally exposed to pesticides. Problems in these areas have necessitated a fundamental shift in the pesticide program from its traditional, primary focus on national licensing activities to a more balanced Headquarters/field effort. Further, local variations in state pesticide programs and in the severity of problems in these areas require a strong but flexible Regional and state presence. Emphasis is placed on using non-regulatory approaches and the Certification and Training program. The increase of 10.1 workyears in the Regional offices will provide guidance to states in the development of their programs, develop coordination mechanisms with state agencies, review state grant applications, provide oversight to state grants and, upon state request, provide additional technical assistance to state programs. In addition, in 1991, Regional offices will help implement the revised C&T regulations.

1990 Program

In 1990, the Agency is allocating a total of $1,994,600 supported by 44.1 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

Headquarters staff is directing the development of training materials in the areas of ground water, endangered species, and worker safety. Updated national training materials are being developed in cooperation with the United States Department of Agriculture (USDA). A major effort to revise the C&T regulations is being completed. It requires states to improve their recordkeeping and examination requirements. Further, the revisions require applicators to renew their certifications periodically. Training requirements for initial certification are being strengthened.

In 1990, emphasis is also being placed on oversight of the process to remedy deficiencies in state pesticide management plans identified through Regional evaluations and negotiations. The program is also implementing rules governing the sale of restricted use pesticides to non-certified persons. Regional staff, in conjunction with USDA, are completing in-depth evaluations of State Cooperative Extension Services' (SCES) training programs for applicator certification and training, and are working with USDA and the SCES to strengthen existing programs. Regional staff are also continuing to provide technical expertise on specific issues relating to the use and application of pesticides.

Regional office staff are implementing the Regional-state capabilities initiative in the areas of protection of ground water, workers occupationally exposed to pesticides, and endangered species.

In 1990, the program is also continuing to implement the EPA/state FIFRA Issues Research and Evaluation Group (EPA/SFIREG) recommendations with emphasis on revising and implementing certification regulations. Initiatives to implement Federally administered state C&T programs are being completed.

1989 Accomplishments

In 1989, the Agency obligated a total of $987,000 supported by 22.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

In 1989, the major focus was to implement the recommendations of the EPA/SFIREG C&T Task Force to upgrade C&T materials. EPA and USDA jointly reviewed all state private applicator training programs. One tribal plan was approved and five were under review. A certification workshop for tribal officials was held.

EPA Regional pesticide experts provided technical expertise on pesticide issues such as certification and training, application techniques, toxicity, pesticide disposal, restricted use pesticides, and other topical pesticide issues.

PESTICIDES PROGRAM IMPLEMENTATION GRANTS

1991 Program Request

The Agency requests a total of $14,500,000 for this program, all of which will be for the Abatement, Control, and Compliance appropriation. This represents an increase of $2,351,000 from 1990, which reflects an increased emphasis on addressing ground-water, endangered species and worker safety concerns.

The 1991 request augments an initiative begun in 1990 to address increasing concerns about the pesticide threat to ground water, endangered species, and workers occupationally exposed to pesticides. Problems in these areas have necessitated a fundamental shift in the pesticide program from its traditional, primary focus on national licensing activities to a more balanced Headquarters/field effort. Further, local variations in state pesticide programs and in the severity of problems in these areas require a strong but flexible Regional and state presence. This initiative will strengthen state capabilities to address the problem of protecting ground water, workers occupationally exposed to pesticides, and species endangered from pesticides. Emphasis is placed on using non-regulatory approaches and the C&T program. For example, resources requested for state grants will be used to expand efforts to assess state vulnerabilities, develop state programs and grant applications, implement programs using outreach, training and education programs, conduct workshops and special projects, and develop and implement public and private sector initiatives. State efforts must be coordinated among concerned state agencies (e.g., agriculture, health, water, and environment). The 1991 increase will be used to implement the revised C&T regulations, and expand worker protection and endangered species programs.

The Agency will continue to promote the correct use of pesticides. To achieve this goal, EPA will continue cooperative agreements with state lead agencies to certify applicators to use restricted use pesticides. EPA will continue to provide grants to the states to support this activity. Certification grants will continue to help support 53 applicator certification programs in participating states and territories and Federally administered programs in Colorado and Nebraska. EPA will continue an interagency agreement with USDA to provide training to pesticide applicators by working through the SCES.

1990 Program

In 1990, the Agency is allocating a total of $12,149,000, all of which is from the Abatement, Control, and Compliance appropriation. These resources support the certification and training program, as well as the program initiated in 1990 to strengthen state capabilities to address problems in protection of ground water, workers occupationally exposed to pesticides, and endangered species.

Funding for certification agreements helps support 53 applicator certification programs in participating states and territories and in the Federally conducted programs in Colorado and Nebraska. EPA is continuing its interagency agreement with USDA to provide training to pesticide applicators by working through the SCES. A grant to the USDA/SCES helps support the applicator training programs.

Regional educational packages and special initiatives to meet national and Regional pesticide issues and critical information gaps are being developed. Resources are also being used to develop training programs for non-agricultural applicators to whom training expertise is not currently available.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,978,100 for this program all of which was from the Abatement, Control and Compliance appropriation.

This funding was used to help support 53 delegated certification programs, 53 delegated training programs, and the Federally conducted programs in Colorado and Nebraska. The states updated their programs to address newly restricted pesticides, changes in technology and new information on the use and effects of pesticides. The program supported C&T special initiatives to address Regional issues and non-agricultural training needs (including proper use of restricted use pesticides in lawn care and within permanent structures, buildings, and relating to ground water and disposal procedures). A steering committee was established to identify and make accessible appropriate private sector resources that are currently not being used in C&T.

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PESTICIDES
Pesticides Enforcement

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Pesticides Enforcement					
Salaries & Expenses	$5,050.1	$5,375.2	$5,551.8	$6,673.9	$1,122.1
Abatement Control and Compliance	$397.7	$103.0	$547.8	$1,800.6	$1,252.8
TOTAL	$5,447.8	$5,478.2	$6,099.6	$8,474.5	$2,374.9
Pesticides Enforcement Grants					
Abatement Control and Compliance	$8,928.0	$12,605.0	$12,444.0	$15,803.4	$3,359.4
TOTAL	$8,928.0	$12,605.0	$12,444.0	$15,803.4	$3,359.4
TOTAL:					
Salaries & Expenses	$5,050.1	$5,375.2	$5,551.8	$6,673.9	$1,122.1
Abatement Control and Compliance	$9,325.7	$12,708.0	$12,991.8	$17,604.0	$4,612.2
Pesticides Enforcement TOTAL	$14,375.8	$18,083.2	$18,543.6	$24,277.9	$5,734.3
PERMANENT WORKYEARS					
Pesticides Enforcement	103.9	132.3	127.1	157.3	30.2
TOTAL PERMANENT WORKYEARS	103.9	132.3	127.1	157.3	30.2
TOTAL WORKYEARS					
Pesticides Enforcement	112.5	132.3	132.2	157.3	25.1
TOTAL WORKYEARS	112.5	132.3	132.2	157.3	25.1

An increase of 8.1 total workyears will allow Regional offices to expand the Federal compliance activities in support of the worker protection regulations begun in FY 1990. The increase will also allow for implementation of compliance programs for container disposal and ground-water and endangered species protection strategies. The Regions will develop specific strategies to address unique local conditions and problems, develop state inspector training materials, and conduct training workshops to train state inspectors in enforcement of the Agency's pesticides in ground water strategy, the worker protection rule, and requirements for endangered species protection. Regional personnel will also conduct inspections and develop cases in support of the new initiatives and will evaluate state grant activities associated with the new initiatives.

An increase of $250,000 in the Abatement, Control, and Compliance appropriation will allow for upgrading of Regional ADP systems with special emphasis on tracking pesticides exports and imports.

Headquarters will provide overall program guidance and management, assist in developing new and revised regulations, and develop compliance monitoring strategies and enforcement response policies for all such rules. Headquarters staff will also provide guidance and general oversight of the Federal/state cooperative enforcement agreement program, and technical and analytical support for Regional activities. Both Headquarters and the Regional offices are responsible for quality assurance and quality control of all enforcement data collected by EPA. Headquarters will also direct the OPTS laboratory data integrity program, which inspects private testing laboratories to determine compliance with Good Laboratory Practices regulations, audits in process and scientific accuracy of completed test studies.

Increases of 4.0 workyears and $1,002,800 in the Abatement, Control, and Compliance appropriation will support program response to the increased enforcement requirements of the 1988 Amendments to FIFRA in areas of voluntary suspension/cancellation of pesticides and associated disposal activities. These activities cannot be financed through the Revolving Fund.

1990 Program

In 1990, the Agency is allocating a total of $6,099,600 supported by 132.2 total workyears for this program, of which $5,551,800 is from the Salaries and Expenses appropriation and $547,800 is from the Abatement, Control and Compliance appropriation. Total workyears include 117.2 from the Salaries and Expenses appropriation and 15.0 from the Reregistration and Expedited Processing Revolving Fund.

In 1990, the Agency is continuing to emphasize state participation in pesticide compliance monitoring and enforcement activities through cooperative enforcement agreements. There are 55 cooperative enforcement agreements with states and territories and eleven additional agreements with Indian Tribes and tribal organizations. Federal compliance monitoring activities continue in states without cooperative agreements. Other Federal responsibilities include import and export surveillance, technical and compliance assistance to the states and the regulated community, and operation of a computer system maintaining pesticide producer establishment and production records and other related enforcement data. Tracking and enforcement of pesticide registration requirements

PESTICIDES

Pesticides Enforcement

Budget Request

The Agency requests a total of $24,277,900 supported by 157.3 total workyears for 1991, an increase of $5,734,300 and 25.1 total workyears from 1990. Of the request, $6,673,900 will be for the Salaries and Expenses appropriation and $17,604,000 will for the Abatement, Control, and Compliance appropriation. This represents an increase of $1,122,100 in the Salaries and Expenses appropriation, an increase of $4,612,200 in the Abatement, Control and Compliance appropriation, an increase of 12.1 total workyears in the Salaries and Expenses appropriation and an increase of 13.0 total workyears from the Reregistration and Expedited Processing Revolving Fund.

PESTICIDES ENFORCEMENT

1991 Program Request

The Agency requests a total of $8,474,500 supported by 157.3 total workyears for this program of which $6,673,900 will be for the Salaries and Expenses appropriation and $1,800,600 will be for the Abatement, Control and Compliance appropriation. Total workyears will include 129.3 from the Salaries and Expenses appropriation and 28.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $1,122,100 for Salaries and Expenses, an increase of $1,252,800 for Abatement, Control, and Compliance, an increase of 12.1 in total Salaries and Expenses workyears, and an increase of 13.0 in total Reregistration and Expedited Processing Revolving Fund workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel costs as well as the increase in total workyears. The increase in the Abatement, Control, and Compliance appropriation will allow upgrading of Regional ADP systems to better track pesticide exports/imports and will support activities to enforce the non-reregistration provisions of the 1988 Amendments to FIFRA.

For reregistration enforcement activities related to the 1988 FIFRA Amendments, the additional 13.0 total workyears will support increased laboratory inspections and data audits and will expand 1988 FIFRA Amendments enforcement activities in the Regions.

In 1991, the Pesticides Enforcement program will continue to concentrate on state delegation, under cooperative enforcement agreements, in the nationwide pesticide compliance monitoring program. The Agency will emphasize achieving compliance with rules governing pesticide use, and place less emphasis on product surveillance in the marketplace. Tracking and enforcement of pesticide registration requirements will be a major component of the pesticide enforcement program. The states will be responsible for enforcing notices of intent to suspend product registrations issued under this compliance program. The Federal role at the Regional level will involve overseeing and managing state cooperative agreement programs and supporting enforcement of new Agency initiatives in worker protection from pesticides contamination by overseeing the development of state enforcement response policies under Sections 26 and 27, and tracking and compliance followup for Section 3(c)(2)(B) cancellations.

continue to be a vital component of the Federal compliance program. Regions are beginning in support of worker protection enforcement activities in the states.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,447,800 supported by 112.5 total workyears for this program. Total dollars included $5,050,100 from the Salaries and Expenses appropriation and $397,700 from the Abatement, Control and Compliance appropriation. Total workyears included 111.0 from the Salaries and Expenses appropriation and 1.5 from the Reregistration and Expedited Processing Revolving Fund.

In 1989, the Federal compliance monitoring program accomplished the following: 106 inspections of pesticide producing establishments, 204 use and re-entry inspections, 160 import inspections at ports of entry, 285 marketplace inspections, and 47 laboratory inspections.

A total of 55 cooperative enforcement agreements were in place with states and territories, plus another eight agreements with Indian Tribes and tribal organizations in 1989. As part of the cooperative agreement program, the Agency provided training for state inspectors, chemists and case development staff.

PESTICIDES ENFORCEMENT GRANTS

1991 Program Request

The Agency requests a total of $15,803,400 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,359,400. The increase will allow states to increase enforcement activities in support of the new worker protection regulations and begin compliance programs in support of new ground-water and endangered species protection programs. Also, the increase will allow states to provide 9,500 inspections to determine compliance with the new disposal, storage, transportation, and recall regulations required by the 1988 Amendments to FIFRA, as well as new pesticide compliance initiatives aimed at regulating pesticide imports and exports.

The Agency will continue to expand the number of cooperative enforcement agreements with participating states and territories to a total of 57, and increase the number of agreements with Indian Nations to 14. The cooperative enforcement agreement program continues to be the primary means for ensuring public and environmental safety from hazardous pesticides by enforcing the requirements of FIFRA. The program is designed to permit participating states and territories to determine their program priorities and utilize the resources provided to act upon these priorities.

State activities will include use and re-entry investigations, pesticide producer establishment and marketplace inspections, applicator license and record inspections, and dealer record inspections.

1990 Program

In 1990, the Agency is allocating a total of $12,444,000 for this program, all of which is from the Abatement, Control and Compliance appropriation.

In 1990, the Agency is continuing 55 cooperative enforcement agreements with states and territories, and eleven additional agreements with Indian Tribes and tribal organizations. These agreements emphasize user compliance with label directions for proper use and application, as well as manufacturer adherence to product formulation requirements under FIFRA. Inspections also address applicator licenses and records, producer establishments, marketplaces, and pesticide dealers.

In this fiscal year, a program in support of the new worker protection regulations has begun. States are ensuring coordination with all agencies responsible for the safety of workers occupationally exposed to pesticides, notifying prospective constituents of the provisions of the final worker protection rule, and conducting worker protection-related inspections, incident investigations, and legal action. The inspections ensure that product labeling includes the new worker protection statements and focus on new use-related requirements under the revised regulations.

1989 Accomplishments

In 1989, the Agency obligated a total of $8,928,000 for this program, all of which was from the Abatement, Control and Compliance appropriation.

Under the terms of their cooperative enforcement agreements, 55 participating states and territories, plus eight Indian Nations, conducted 12,639 use, reentry and experimental use inspections, 1,488 inspections of pesticide-producing establishments, 7,130 applicator license and record inspections, 3,981 dealer record inspections, 5,662 marketplace inspections and 273 import inspections.

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RADIATION

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
APPROPRIATION					
Salaries & Expenses	$11,862.7	$12,914.6	$12,464.2	$14,977.5	$2,513.3
Abatement Control and Compliance	$10,710.7	$20,623.3	$20,349.2	$21,612.7	$1,263.5
Research & Development	$2,170.7	$2,324.9	$2,258.1	$2,519.5	$261.4
TOTAL, Radiation	$24,744.1	$35,862.8	$35,071.5	$39,109.7	$4,038.2
PERMANENT WORKYEARS	241.7	281.2	275.2	301.8	26.6
TOTAL WORKYEARS	253.0	281.2	277.8	301.8	24.0
OUTLAYS	$22,383.1	$31,472.9	$31,330.5	$35,040.9	$3,710.4
AUTHORIZATION LEVELS	The "Indoor Radon Abatement Act of 1988" authorizes $45 million over 1989, 1990, and 1991. All other authorization except for Research and Development is by virtue of the Appropriation Act. The Environmental Research, Development and Demonstration Act expired September 30, 1981. Reauthorization is pending.				

RADIATION

OVERVIEW AND STRATEGY

EPA's mandate to protect the public health and environment from adverse effects of radiation exposure is derived from several statutes: the Atomic Energy Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Uranium Mill Tailings Radiation Control Act, the Indoor Radon Abatement Act (IRAA) of 1988, and the Superfund Amendments and Reauthorization Act (SARA). Other authorities are contained in the Nuclear Waste Policy Act; the Federal Water Pollution Control Act; the Marine Protection, Research, and Sanctuaries Act; the Safe Drinking Water Act; the Public Health Service Act; and the National Environmental Policy Act.

The statutes prescribe EPA's role in assessing the environment, evaluating technology, setting standards, issuing policy and guidance, and conducting research. In some cases, the statutes vest enforcement responsibilities in other agencies, notably the Nuclear Regulatory Commission (NRC). In these instances, EPA performs some oversight functions to ensure compliance with established standards and guidance.

EPA's radiation program has four major objectives: (1) reduce health effects and environmental impacts; (2) assess emerging radiation problems; (3) maintain a capability to respond to emergencies; and (4) carry out supporting research.

Reduce Adverse Health Effects and Environmental Impact from Radiation Exposure through a Program of Standards and Guides

Under the Clean Air Act, EPA assesses and regulates source categories that emit airborne radionuclides. The Agency promulgates and implements National Emission Standards for Hazardous Air Pollutants (NESHAPs). In 1991 the Agency will implement final NESHAPs rules issued in calendar year 1989, as well as begin to carry out new requirements included in anticipated changes to the Clean Air Act. EPA will provide implementation guidance to states and EPA Regional Offices, and will work with states to transfer NESHAPs implementation responsibility to them. The Agency will also develop model state guidance for the control of radionuclides, establish training programs for implementation at the Regional and state levels, maintain a national data base related to the implementation program, and provide technical assistance to inspection teams.

EPA evaluates and regulates various classes of radioactive wastes and disposal options through a program designed to ensure environmentally sound waste disposal practices that limit exposure to radiation. As part of the effort to address the problem of radioactive waste disposal, EPA will promulgate final low-level and high-level radioactive waste standards. The Agency will also begin to develop guidance for the clean-up of residual radioactivity.

Assess and Quantify Existing and Emerging Radiation Problems and their Potential Impact

The increasing use of radioactive materials has been accompanied by more widespread knowledge about radiation exposure and the potential for contamination of environmental pathways. As a consequence, requests for assistance in site assessments and radiochemical analyses of environmental samples have increased substantially, particularly from the Federal sector.

One of the most significant radiation problems identified in recent years is indoor radon. Radon, a naturally occurring radioactive gas, is estimated to cause about 20,000 lung cancer fatalities annually. In response to elevated indoor radon levels found across the country, the Congress enacted the Indoor Radon Abatement Act (IRAA) in 1988. The Act includes a mandate to set a long-term national goal of reducing indoor radon concentrations to ambient levels.

The radon program consists of four objectives: assessing the problem, carrying out mitigation and prevention research and applications, developing state and private sector capability, and developing and disseminating public information and education materials. The activities, which incorporate functions mandated under IRAA, the Superfund Amendments and Reauthorization Act (SARA), and other statutory authority, are part of an integrated program that relies on a voluntary partnership among the Federal, state, and private sectors.

In 1991 EPA will continue its Radon state grant program to help states develop and implement programs to assess and mitigate radon. The Agency will conduct data analysis for the National Survey of Radon in Residences and issue a final report. In addition, the Agency will complete the design of the National Survey of Radon in Schools and will initiate a survey. EPA will also provide assistance to states and Indian nations in the design and execution of statewide radon surveys. The national Radon Contractor Proficiency (RCP) program will continue to evaluate the capability of mitigation firms and the national Radon Measurement Proficiency (RMP) program will assess the capability of measurement firms. EPA will continue to provide radon mitigation and prevention training through regional training centers; the House Evaluation Programs (HEPs), which provide hands-on radon measurement, mitigation, and prevention training to state personnel, private contractors, and home builders; and the Radon Diagnostic and Mitigation Training Course. The Agency will promulgate user fee regulations and begin collecting fees for its radon training and proficiency programs.

Maintain a Capability to Respond to Emergencies and to Aid Development and Testing of State, Local, and Federal Plans for Emergency Response

The Agency maintains the Environmental Radiation Ambient Monitoring System (ERAMS) to provide a mechanism for tracking and measuring large atmospheric releases of radioactive materials across the country. The system also provides continuous information on radiation levels in environmental pathways. The Agency maintains two emergency response teams in a state of readiness so that they can be flown to sites where significant radiation releases have occurred or appear imminent. In 1991 EPA will extend the number of staff trained to respond to radiation emergencies and evaluate the mobile radiation laboratories for equipment refitting or replacement. The Agency will also participate in full field exercises scheduled by the Federal Emergency Management Agency (FEMA) and continue to monitor rocket launches in which radioactive materials are involved.

As part of its nuclear accident response efforts, EPA will issue a draft interim protective action guide (PAG) for ingestion (food and water) pathways, initiate development of a training program for implementing the ingestion PAG, and complete training programs for early phase (evaluation and sheltering) and relocation PAGs.

Conduct Supporting Research

The EPA Office of Research and Development (ORD) performs two key functions in support of the Agency's radiation goals. First, ORD provides data needed to support the Agency's Radon Action Program. In 1991 ORD will continue to demonstrate radon mitigation techniques in a variety of residential structures, in coordination with the Agency's HEP, and will use the results to publish updated handbooks and technical manuals that detail mitigation techniques for homeowners and builders. ORD will also continue its mitigation demonstration program to address schools with elevated levels of radon.

Second, to assist laboratories that measure radionuclide emissions, ORD provides monitoring and quality assurance support, including inter-laboratory comparison studies. Under an interagency agreement with the Department of Energy, ORD also provides support in the form of off-site monitoring around nuclear test sites. This support includes long-term hydrological monitoring, a human surveillance investigation program, and maintenance of a radiation data base.

Consulting Services

The Office of Air and Radiation will fund a limited amount of consulting services in 1991. These will be limited to obtaining specialized expertise for radiochemical analyses, nuclear emergency response training, and the development of computer models.

RADIATION

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE (+) DECREASE (-) 1991 VS 1990
Cumulative Outputs				
Regulations				
Proposals	9	3	1	-2
Negative Determinations .	3	3	--	-3
Promulgations	--	10	3	-7

Key for Cumulative Outputs:

1989:	Radionuclide NESHAPs proposed for 9 source categories Negative determination proposed for 3 source categories
1990:	Radionuclide NESHAPs promulgated for 9 source categories Negative determinations final for 3 source categories 1 final Uranium Mill Tailings Radiation Control Act standard promulgated 1 low-level waste standard proposed 1 high level waste standard proposed Proposed amendment of Prevention of Significant Deterioration (PSD) standards to include radionuclides.
1991:	1 low level waste standard promulgated 1 high level waste standard promulgated Promulgate amendment of PSD standards Radionuclide NESHAPs proposed for 1 source category

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RADIATION
Radiation Research

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Monitoring Systems & Quality Assurance - Radiation						
Salaries & Expenses		$163.8	$287.8	$284.0	$292.3	$8.3
	TOTAL	$163.8	$287.8	$284.0	$292.3	$8.3
Environmental Engineering and Technology - Radiation						
Salaries & Expenses		$1,160.5	$1,365.0	$1,134.1	$1,298.9	$164.8
Research & Development		$2,170.7	$2,324.9	$2,258.1	$2,519.5	$261.4
	TOTAL	$3,331.2	$3,689.9	$3,392.2	$3,818.4	$426.2
TOTAL:						
Salaries & Expenses		$1,324.3	$1,652.8	$1,418.1	$1,591.2	$173.1
Research & Development		$2,170.7	$2,324.9	$2,258.1	$2,519.5	$261.4
Radiation Research	TOTAL	$3,495.0	$3,977.7	$3,676.2	$4,110.7	$434.5
PERMANENT WORKYEARS						
Monitoring Systems & Quality Assurance - Radiation		3.5	4.7	4.7	4.7	0.0
Environmental Engineering and Technology - Radiation		18.6	17.9	17.7	17.7	0.0
TOTAL PERMANENT WORKYEARS		22.1	22.6	22.4	22.4	0.0
TOTAL WORKYEARS						
Monitoring Systems & Quality Assurance - Radiation		3.7	4.7	4.7	4.7	0.0
Environmental Engineering and Technology - Radiation		18.7	17.9	17.7	17.7	0.0
TOTAL WORKYEARS		22.4	22.6	22.4	22.4	0.0

RADIATION

Radiation Research

Principal Outputs by Objective

Objective 1: **Provide Monitoring and Quality Assurance Support to Federal, State, and Local Laboratories**

1991:
- Annual report for Calendar Year 1991 on off-site surveillance around the Nevada Test Site (Monitoring).

1990:
- Annual report for Calendar Year 1990 on off-site surveillance around the Nevada Test Site (Monitoring).
- Annual report on laboratory radionuclide intercomparison studies (Monitoring).

1989:
- Annual report for Calendar Year 1989 on off-site surveillance around the Nevada Test Site (Monitoring).

Objective 2: **Provide Scientific Data to Support the Radon Action Program**

1991:
- Update on "Application of Radon Reduction Methods" (Engineering).
- Study of radon and radon progeny air cleaners, novel mitigation concepts, and approaches for radon-resistant new school construction (Engineering).
- Guidance Manual on Radon Resistant New Construction in Schools (Engineering).

1990:
- Second annual international symposium on Radon and Radon Reduction Technology (Engineering).
- Updated guidance to mitigation professionals, do-it-yourself homeowners, and State officials on radon mitigation techniques for existing homes (Engineering).
- Report on initial school mitigation studies (Engineering).

1989:
- Updated guidance manual "Radon Resistant Residential New Construction" (Engineering).
- First Edition of the Technical Guidance Document on Radon Reduction in Schools (Engineering).

RADIATION

Radiation Research

Budget Request

The Agency requests a total of $4,110,700 supported by 22.4 total workyears for 1991, an increase of $434,500 from 1990 and no change in total workyears. Of the request, $1,591,200 will be for the Salaries and Expenses appropriation and $2,519,500 will be for the Research and Development appropriation, an increase of $173,100 and $261,400 respectively.

Program Objectives

This research program provides the Office of Radiation Programs (ORP) and other EPA, Federal, Regional, State and local officials with the scientific data, methods, assessments and mitigative techniques necessary to determine and control public exposure to radon and other radioactive materials in the environment. The following objectives support these goals:

Objective 1. Provide Monitoring and Quality Assurance Support to Federal, State, and Local Laboratories. This program provides comprehensive radiological monitoring and surveillance services to meet specific Department of Energy (DOE) requirements for its nuclear testing programs, especially at the Nevada Test Site. This work is conducted under a reimbursable arrangement with DOE. EPA conducts a radiochemical analytical quality assurance program which supports Federal, State, and local laboratories making radioactivity measurements.

Objective 2. Provide Scientific Data to Support the Radon Action Plan. Under this program, the Office of Research and Development (ORD) conducts research on, demonstrates and evaluates techniques to prevent and mitigate exposure to radon gas in new and existing homes, and in school buildings.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $292,300 supported by 4.7 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents a minor increase in support for increased personnel and support costs, and no change in total workyears.

Provide Monitoring and Quality Assurance Support to Federal, State, and Local Laboratories. This research program will provide the data needed by policymakers to make decisions regarding the control of public exposure to radioactive materials. Monitoring support for DOE at the Nevada Test Site and other test locations will be provided. An annual report for Calendar Year 1991 will be completed on the off-site surveillance around the Nevada Test Site. This support consists of a radiation safety monitoring program; a long-term hydrological monitoring program; a human radiation monitoring program; and maintenance of the radiation data base. Technical expertise and guidance will be provided to Regional, State, and contractor laboratories for radiochemical analyses of environmental samples. Inter-laboratory comparison studies will be conducted to provide data on the precision and accuracy of radioactivity measurements in milk, drinking water, and air.

1990 Program

In 1990, the Agency is allocating a total of $284,000 supported by 4.7 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

Monitoring support, including routine monitoring in off-site areas and support during nuclear tests is being provided to the Department of Energy at the Nevada Test Site and other installations. This will include reports on the laboratory radionuclide intercomparision studies, and the anuual report for surveillance around the Nevada Test Site for Calendar Year 1990. Support will also be provided to the site characterization studies of Yucca Mountain under consideration as a potential site for the disposal of high-level radioactive waste. Activities there will include both baseline studies and monitoring during facility construction. In addition, the Agency is conducting a quality assurance program for Regional, State, and contractor laboratories involved in the radiochemical analyses of radionuclides in environmental samples.

1989 Accomplishments

In 1989, the Agency obligated a total of $163,800 supported by 3.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

The research program office published the annual report on the off-site surveillance program for Calendar Year 1989.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $3,818,400 supported by 17.7 total workyears for this program, of which $1,298,900 will be for the Salaries and Expenses appropriation and $2,519,500 will be for the Research and Development appropriation. This represents increases of $164,800 and $261,400 respectively, and no change in total workyears. The increase in funding will be used for increased personnel and support costs, and school mitigation research, respectively.

Provide Scientific Data to Support the Radon Action Plan. Exposure to indoor radon gas poses a significant risk to public health. To address the risks associated with radon and to respond to growing public concern, the "Radon Gas and Indoor Air Quality Research Act of 1986" (SARA, Title IV) and the "Indoor Radon Abatement Act of 1988" were enacted. These Acts authorize EPA to conduct a variety of applied research on indoor radon including demonstrations of techniques to reduce exposures. The primary objective of the radon mitigation program is to develop and demonstrate technology that achieves an indoor air quality that is as free of radon as the ambient air outside. The 1991 radon research program will carry out this responsibility three ways: (1) demonstrating and evaluating mitigation techniques in existing homes; (2) evaluating preventive measures for homes under construction; and (3) evaluating mitigation techniques for school buildings. The School Mitigation Research program will emphasize demonstrations of the effectiveness of sub-slab suction systems in a variety of geological and climatic conditions around the country. Also this program will assess whether radon mitigation techniques presently used in houses are effective in schools. The school mitigation program will provide the results from the research to State agencies and local school districts. The research program will update the "Application of Radon Reduction Methods." The research office will also do a study on radon and radon progeny air cleaners, novel mitigation concepts, and approaches for radon-resistant new school construction. The research office will produce a guidance manual on radon resistant new construction in schools.

1990 Program

In 1990, the Agency is allocating a total of $3,392,200 supported by 17.7 total workyears for this program, of which $1,134,100 is from the Salaries and Expenses appropriation and $2,258,100 is from the Research and Development appropriation.

Radiation mitigation research will emphasize the development and demonstration of radon mitigation technologies which will reduce indoor radon levels to 4 pCi/L in both new and existing homes and in schools. This research will develop techniques appropriate for a sample of home construction types, geological characteristics, geographic variations and initial radon levels. The School Mitigation Research program will develop and demonstrate radon mitigation techniques for schools and will assist the Office of Air and Radiation (OAR) in providing technical assistance to Regions, States, and local school authorities. This will include a report on the initial school mitigation studies. There will be an updated guidance to mitigation professionals, do-it-yourself homeowners, and State officials on radon mitigation techniques for existing homes. Specifically, the Agency will examine and issue a study on the structural, architectural, and ventilation differences between homes and schools to determine if the unique characteristics of school buildings alter the effectiveness of previously examined mitigation techniques. The second annual international symposium on radon and radon reduction technology will held in 1990.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,331,200 supported by 18.7 total workyears for this program, of which $1,160,500 was from the Salaries and Expenses appropriation and $2,170,700 was from the Research and Development appropriation.

Demonstrations of radon mitigation techniques were conducted in new and existing homes, and in schools. Technical guidance documents were produced for both of these dwellings. The brochure "Radon Reduction Methods: A Homeowners Guide" continued to be reprinted and widely circulated throughout the nation. The results of research in new homes was used to update the manual entitled "Radon Resistant Residential New Construction." In addition, Agency staff provided technical information to community leaders and participating homeowners at demonstration sites. The first edition of the "Technical Guidance Document on Radon Reduction in Schools" was published.

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RADIATION
Radiation Criteria, Standards & Guidelines

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM					
Radiation Criteria, Standards & Guidelines					
Salaries & Expenses	$3,364.2	$3,469.6	$3,422.9	$4,034.8	$611.9
Abatement Control and Compliance	$1,939.1	$1,766.8	$1,744.3	$2,194.4	$450.1
TOTAL	$5,303.3	$5,236.4	$5,167.2	$6,229.2	$1,062.0
TOTAL:					
Salaries & Expenses	$3,364.2	$3,469.6	$3,422.9	$4,034.8	$611.9
Abatement Control and Compliance	$1,939.1	$1,766.8	$1,744.3	$2,194.4	$450.1
Radiation Criteria, Standards & Guidelines TOTAL	$5,303.3	$5,236.4	$5,167.2	$6,229.2	$1,062.0
PERMANENT WORKYEARS					
Radiation Criteria, Standards & Guidelines	56.7	57.6	57.6	61.6	4.0
TOTAL PERMANENT WORKYEARS	56.7	57.6	57.6	61.6	4.0
TOTAL WORKYEARS					
Radiation Criteria, Standards & Guidelines	58.4	57.6	57.6	61.6	4.0
TOTAL WORKYEARS	58.4	57.6	57.6	61.6	4.0

RADIATION

Radiation Criteria, Standards, and Guidelines

Budget Request

The Agency requests a total of $6,229,200 supported by 61.6 total workyears for 1991. Of the request, $4,034,800 will be for the Salaries and Expenses appropriation and $2,194,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $611,900 in the Salaries and Expenses appropriation, an increase of $450,100 in the Abatement, Control and Compliance appropriation, and an increase of 4.0 workyears from 1990.

RADIATION CRITERIA, STANDARDS, AND GUIDELINES

1991 Program Request

The Agency requests a total of $6,229,200 supported by 61.6 total workyears for this program, of which $4,034,800 will be for the Salaries and Expenses appropriation and $2,194,400 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $611,900 in the Salaries and Expenses appropriation, an increase of $450,100 in the Abatement, Control and Compliance appropriation, and an increase of 4.0 workyears from 1990. EPA will use the increases to develop guidance for state permit programs under the final National Emission Standards for Hazardous Air Pollutants (NESHAPs) covering airborne radionuclides.

In 1991 EPA will continue to concentrate on three major program areas: addressing airborne radionuclides, establishing standards for radioactive waste management, and developing Federal guidance. The airborne radionuclides effort will focus on implementing the final NESHAPs rules issued in calendar year 1989. The Agency will continue to promote the transfer of NESHAPs implementation responsibilities to the states. This effort will include the development of guidance and criteria for state permit programs for the radionuclide NESHAPs. The Agency will also develop model state guidance for the control of airborne radionuclides, establish training programs for implementing these standards at the Regional and state levels, maintain a national data base related to the implementation program, and provide technical assistance to enforcement efforts.

EPA will promulgate final standards for the disposal of low-level and high-level radioactive wastes. The Agency will also begin to develop guidance on the clean-up of residual radioactivity. Over 20,000 sites (including Department of Energy facilities and over 100 nuclear power reactors) exist where radioactive materials are used. Many of these will be candidates for decommissioning over the next several decades. Without controls, lifetime health risks could be as high as 1 in 100. Billions of dollars potentially could be wasted by inadequate clean-up efforts.

As part of its nuclear accident response efforts, EPA will issue draft interim protective action guides (PAGs) for ingestion (food and water) pathways, initiate development of a draft interim PAG for accident contamination recovery, initiate development of a training program for implementing these PAGs, and complete training programs for the early phase (evaluation and sheltering) and relocation PAGs.

1990 Program

In 1990 the Agency is allocating a total of $5,167,200 supported by 57.6 total workyears for this program, of which $3,422,900 is from the Salaries and Expenses appropriation and $1,744,300 is from the Abatement, Control and Compliance appropriation.

In 1990 EPA is concentrating on three major program areas: addressing airborne radionuclides, establishing standards for radioactive waste management, and developing Federal guidance. The Agency is focusing the 1990 airborne radionuclides effort on implementing the final NESHAPs rules issued in calendar year 1989. The Agency is initiating a program to promote the transfer of NESHAPs implementation responsibilities to the states and is providing guidance to those states seeking delegation of authority. EPA is also conducting pilot Regional and state training programs and providing guidance to the Regions on implementing the regulations. In addition, the Agency is developing a national data base on radionuclide emissions for the implementation program. Finally, the Agency is reviewing requests for construction, waivers, or alternative standards.

The courts have stayed the portion of the NESHAPs rules that governs air emissions of radionuclides from facilities regulated by the Nuclear Regulatory Commission (NRC), pending reconsideration of this portion of the rule. EPA will determine the result of this reconsideration in 1990.

As part of the effort to address the problem of radioactive waste disposal, EPA is continuing its efforts to publish a notice of proposed rulemaking (NPRM) for the land disposal of low-level radioactive waste, including naturally occurring and accelerator produced materials. In order to provide required implementation assistance to the Regions and states, the Agency is developing site evaluation guidance and a site evaluation model as well as other user-friendly computer models. In addition, following the completion of both the background information document and the economic assessment, EPA will conduct public hearings and receive and consider comments for the low-level waste final rule.

EPA is also developing new high-level waste standards as required by a court remand. The Agency will complete a background information document and an economic assessment, issue a NPRM, and hold public hearings in 1990. In addition, the Agency will augment existing standards for inactive mill tailings sites under the Uranium Mill Tailings Radiation Control Act with the repromulgation of standards for ground water protection at these sites.

The Agency is maintaining its radiofrequency measurement capabilities and conducting limited field studies for electromagnetic fields. The Agency is developing a public information document and is continuing to provide technical advice, assistance, and oversight.

As part of its nuclear accident response efforts, EPA will issue in 1990 revised draft interim PAGs for early phase and relocation and is initiating development of draft interim PAGs for ingestion pathways. The Agency is conducting a training program to help ensure the uniform application of PAGs nationwide in emergency situations.

1989 Accomplishments

In 1989 the Agency obligated $5,303,300 and 58.4 total workyears for this program, of which $3,364,200 was from the Salaries and Expenses appropriation and $1,939,100 was from the Abatement, Control and Compliance appropriation.

In 1989 EPA worked to revise the radionuclide NESHAPs in accordance with the court remand of established standards. The Agency published a notice of proposed rulemaking, conducted public hearings, and received and considered comments. The Agency made modifications, as necessary, to respond to the court decision that limits the use of cost factors in establishing required levels. EPA reviewed all standards previously promulgated for compliance with the court order, and reexamined source categories that were determined not to require regulation to determine the propriety of those decisions.

EPA continued efforts to publish the NPRM for land disposal of low-level radioactive waste and to repropose the high-level waste standard remanded by the court. In support of these efforts, EPA continued development of background information documents and economic assessments for both standards. The Agency phased down the development of residual radioactivity guidance after completing a risk assessment and a sensitivity analysis of the on-site pathway code. In addition, the Agency initiated an inventory of contaminated sites.

EPA completed a study of electromagnetic radiation emitted from the Voice of America radio tower and issued a report of the findings. The Agency also developed PAGs for early phase and for relocation in the event of a nuclear incident. The Agency incorporated the PAGs for relocation into the Manual of Protective Actions, used in Federal, state, and local emergency preparedness plans in the event of a domestic or foreign radiation incident. The Agency initiated work on revised draft interim PAGs for early phase and relocation.

RADIATION
Radiation Program Implementation

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Radiation Program Implementation						
Salaries & Expenses		$445.1	$364.2	$363.2	$827.9	$464.7
	TOTAL	$445.1	$364.2	$363.2	$827.9	$464.7
TOTAL:						
Salaries & Expenses		$445.1	$364.2	$363.2	$827.9	$464.7
Radiation Program Implementation	TOTAL	$445.1	$364.2	$363.2	$827.9	$464.7
PERMANENT WORKYEARS						
Radiation Program Implementation		7.2	7.0	5.5	17.0	11.5
TOTAL PERMANENT WORKYEARS		7.2	7.0	5.5	17.0	11.5
TOTAL WORKYEARS						
Radiation Program Implementation		9.0	7.0	7.0	17.0	10.0
TOTAL WORKYEARS		9.0	7.0	7.0	17.0	10.0

RADIATION

Radiation Program Implementation

Budget Request

The Agency requests a total of $827,900 supported by 17.0 total workyears for 1991, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $464,700 in the Salaries and Expenses appropriation and an increase of 10.0 total workyears from 1990.

RADIATION PROGRAM IMPLEMENTATION

1991 Program Request

The Agency requests a total of $827,900 supported by 17.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $464,700 in the Salaries and Expenses appropriation and an increase of 10.0 total workyears from 1990. The Agency will use the increase to implement, at the Regional level, the final National Emission Standards for Hazardous Air Pollutants (NESHAPs) covering airborne radionuclides.

In 1991 the Regions will participate fully in all aspects of the radionuclide NESHAPs implementation program. Currently, many state radiation programs are not adequate to assume delegated authority for implementing the radionuclide NESHAPs. Consequently, the Agency must bear primary responsibility for implementing the program. Much of this task will fall on the Regional offices. They will perform many of the initial permitting functions while at the same time work to strengthen state radiation programs to accept delegated authority for implementing the radionuclide NESHAPs. The Regions will also review applications from regulated facilities for construction permits, modifications to facilities, and waivers and exemptions. Regional staff will also provide technical assistance for radionuclide NESHAPs enforcement activities.

The testing and evaluation of state emergency response plans will continue to be an important element of Regional operations, along with the review of updated plans. EPA will continue to assist states in the development of radiological emergency response plans and will formally review these plans along with other Federal agencies. Also, the Regions will remain involved with state agencies and the public in presenting and interpreting Agency information and guidance regarding radiation problems in their area.

The Regions will continue to participate in the identification and assessment of hazardous waste sites that are contaminated with radioactivity, and will serve as coordination points for remedial action programs for such sites in their Regions. This effort supports both the EPA Headquarters hazardous waste programs and the requests from the states. The Regions will continue to be the primary reviewers of environmental impact statements for radiation facilities, such as commercial nuclear power plants, uranium mines and mills, and radioactive waste disposal facilities. They will also respond to special problems involving actual or potential radiation releases or exposures.

1990 Program

In 1990 the Agency is allocating a total of $363,200 supported by 7.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

In 1990 the Regions are participating in all aspects of the implementation program for emission sources within their geographic boundaries covered by NESHAPs for airborne radionuclides. Implementation includes reviewing requests to construct or modify facilities subject to radionuclide NESHAPs. The Regions are also providing coordination necessary where the national program is directly involved in implementation of the radionuclide NESHAPs in areas such as waivers and alternate requirements.

In addition, the Regional radiation program is continuing to focus on emergency preparedness and technical assistance to states, including participating in Regional Assistance Committees, testing and evaluating emergency response plans, and reviewing updated state and local emergency response plans. Regional programs also continue to be involved in the characterization of hazardous waste sites subject to possible remedial action. This includes staff participation as on-site radiation consultants in addressing problems at sites that are on the Superfund National Priority List. The Regions are continuing as the primary reviewer of environmental impact statements for radiation facilities, such as uranium mills and mines, and radioactive waste disposal facilities.

1989 Accomplishments

In 1989 the Agency obligated a total of $445,100 supported by 9.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

In 1989 emergency preparedness and technical assistance to the states and other EPA Regional programs remained a central focus of the Regional radiation program. The Regions also reviewed requests to construct or modify facilities and requests for exemptions for facilities covered by airborne radionuclide NESHAPs. They continued to review environmental impact statements for radiation facilities, such as uranium mills and mines, and radioactive waste disposal sites. They also continued to be involved in the characterization of hazardous waste sites, and provided technical assistance and advice to the Superfund program on actual or possible remedial actions.

RADIATION
Radiation Environmental Impact Assessment

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Radiation Environmental Impact Assessment						
Salaries & Expenses		$3,271.2	$3,151.2	$3,092.8	$3,340.5	$247.7
Abatement Control and Compliance		$29.0	$29.9	$29.6	$30.3	$.7
	TOTAL	$3,300.2	$3,181.1	$3,122.4	$3,370.8	$248.4
TOTAL:						
Salaries & Expenses		$3,271.2	$3,151.2	$3,092.8	$3,340.5	$247.7
Abatement Control and Compliance		$29.0	$29.9	$29.6	$30.3	$.7
Radiation Environmental Impact Assessment	TOTAL	$3,300.2	$3,181.1	$3,122.4	$3,370.8	$248.4
PERMANENT WORKYEARS						
Radiation Environmental Impact Assessment		44.4	51.0	51.0	51.0	0.0
TOTAL PERMANENT WORKYEARS		44.4	51.0	51.0	51.0	0.0
TOTAL WORKYEARS						
Radiation Environmental Impact Assessment		48.6	51.0	51.0	51.0	0.0
TOTAL WORKYEARS		48.6	51.0	51.0	51.0	0.0

RADIATION

Radiation Environmental Impact Assessment

Budget Request

The Agency requests a total of $3,370,800 supported by 51.0 total workyears for 1991. Of the request, $3,340,500 will be for the Salaries and Expenses appropriation and $30,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $247,700 for the Salaries and Expenses appropriation, an increase of $700 in the Abatement, Control and Compliance appropriation, and no change total workyears.

RADIATION ENVIRONMENTAL IMPACT ASSESSMENT

1991 Program Request

The Agency requests a total of $3,370,800 supported by 51.0 total workyears of which $3,340,500 will be for the Salaries and Expenses appropriation and $30,300 will be for Abatement, Control and Compliance appropriation. This represents an increase of $247,700 in the Salaries and Expenses appropriation, an increase of $700 in the Abatement, Control and Compliance appropriation, and no change in total workyears. The increase reflects increased personnel and support costs.

In 1991 the Agency will continue to support development, implementation, and enforcement of standards under the Clean Air Act, the Atomic Energy Act, and other statutory authorities. This will include laboratory support to be provided to the Regions and states for air sampling in conjunction with the implementation effort for airborne radionuclide National Emission Standards for Hazardous Air Pollutants (NESHAPs).

The Agency will continue work to enhance its ability to respond to nuclear accidents. This effort will once again include training additional radiation staff beyond those who routinely participate in emergency response tests and exercises. In 1991 EPA will also evaluate the mobile radiation laboratories for equipment refitting or replacement. EPA will continue to maintain its base emergency response capabilities at two field locations and Headquarters, and will participate in field exercises scheduled by the Federal Emergency Management Agency (FEMA). The Agency will continue to monitor rocket launches in which radioactive materials are involved. The 268 stations of the Environmental Radiation Ambient Monitoring System (ERAMS), which collect and analyze samples of air, precipitation, and milk to help determine ambient radiation levels, will continue in full operation.

The Agency will continue technical analyses and associated quality assurance programs in support of regulatory development and implementation efforts. EPA will continue to provide limited support to states, Indian nations, other Federal agencies, and other parts of EPA in the form of radiochemical analyses, technical assistance, and participation in targeted conferences to address unique radiation problems.

1990 Program

In 1990 the Agency is allocating a total of $3,122,400 supported by 51.0 total workyears for this program, of which $3,092,800 is from the Salaries and Expenses appropriation and $29,600 is from the Abatement, Control and Compliance appropriation.

In 1990 EPA is continuing to support the development, implementation, and enforcement of standards and guidance. This includes support for implementing NESHAPs for airborne radionuclides and collecting and analyzing air samples from facilities to verify compliance with existing standards.

EPA continues to maintain emergency response capabilities at two field locations and Headquarters and to participate in field exercises scheduled by FEMA. In calendar year 1989 EPA participated in the response to three potentially uncontrolled releases of radiological contamination -- discharges at the Rocky Flats nuclear weapons plant near Denver, Colorado; abandoned stores of radium at the Radium Chemical warehouse in New York City, and the launch of the Atlantic Space Shuttle carrying the nuclear powered satellite, Galileo. In 1990 EPA is extending training for nuclear accident responses to the radiation staff beyond the core group who normally participate in tests and exercises of the existing Federal emergency response plans. Other activities include coordinating EPA Regional review and testing of state emergency response plans; participating in contingency planning for the space shuttle launch carrying the nuclear powered satellite, Ulysses, in the Autumn of 1990; assisting other EPA offices and state radiological programs; and operating ERAMS.

EPA also provides limited support to states, other Federal agencies, and other parts of EPA in the form of radiochemical analyses, technical assistance, and participation in the Conference of Radiation Control Program Directors. The Agency is making available reports of radiation levels in naval harbors surveyed at the request of the Navy.

1989 Accomplishments

In 1989 the Agency obligated a total of $3,300,200 supported by 48.6 total workyears for this program of which $3,271,200 was from the Salaries and Expenses appropriation and $29,000 was from the Abatement, Control and Compliance appropriation.

In 1989 EPA continued laboratory and technical support for regulation and guidance development. The Agency continued to develop risk assessment methodology in support of regulations for residual radioactivity at decommissioned nuclear facilities. The Agency also conducted environmental assessments in harbors servicing nuclear-powered vessels, in accordance with an Interagency Agreement with the Navy. A similar arrangement with the Federal Communications Commission provides for measurement of radiofrequency levels in specific locations of interest or concern.

Program activities also included the maintenance of an emergency response capability, coordination of EPA Regional review and testing of state emergency response plans, participation in the Defense Nuclear Agency-sponsored Distinct Action exercise, assistance to other EPA offices and to state radiological programs, and operation of ERAMS.

RADIATION
Radon Action Program

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PROGRAM					
Radon Action Program					
Salaries & Expenses	$2,662.1	$3,096.5	$2,756.7	$3,347.1	$590.4
Abatement Control and Compliance	$8,742.6	$17,842.0	$9,603.2	$10,388.0	$784.8
TOTAL	$11,404.7	$20,938.5	$12,359.9	$13,735.1	$1,375.2
TOTAL:					
Salaries & Expenses	$2,662.1	$3,096.5	$2,756.7	$3,347.1	$590.4
Abatement Control and Compliance	$8,742.6	$17,842.0	$9,603.2	$10,388.0	$784.8
Radon Action Program TOTAL	$11,404.7	$20,938.5	$12,359.9	$13,735.1	$1,375.2
PERMANENT WORKYEARS					
Radon Action Program	38.5	54.7	49.5	51.1	1.6
TOTAL PERMANENT WORKYEARS	38.5	54.7	49.5	51.1	1.6
TOTAL WORKYEARS					
Radon Action Program	39.4	54.7	49.5	51.1	1.6
TOTAL WORKYEARS	39.4	54.7	49.5	51.1	1.6

RADIATION

Radon Action Program

Budget Request

The Agency requests a total of $13,735,100 supported by 51.1 total workyears for 1991, an increase of $1,375,200 and 1.6 total workyears from 1990. Of the request, $3,347,100 will be for the Salaries and Expenses appropriation and $10,388,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $590,400 in the Salaries and Expenses appropriation, an increase of $784,800 in the Abatement, Control and Compliance appropriation, and an increase of 1.6 total workyears.

RADON ACTION PROGRAM

1991 Program Request

The Agency requests a total of $13,735,100 supported by 51.1 total workyears for this program, of which $3,347,100 will be for the Salaries and Expenses appropriation and $10,388,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $590,400 in the Salaries and Expenses appropriation, an increase of $784,800 in the Abatement, Control and Compliance appropriation, and an increase of 1.6 total workyears. The increases reflect an increase in personnel and support costs, increased measurement and mitigation training and technical assistance to schools, and initiation of the National Survey of Radon in Schools.

In 1991 EPA will continue to conduct a comprehensive Radon Action Program through partnerships with states to minimize the health risks of radon exposure. The Agency will continue to assess the nation's radon problems in homes, schools, and other public buildings. The Agency will complete data analysis for the national survey of radon in residences and issue a final report. The Agency will also complete design of the national survey of radon in schools and initiate the survey. This survey will target high-risk areas, characterize the nature and extent of radon contamination in the nation's school buildings, and be complemented by the transfer of more detailed information about measurement and mitigation techniques to schools throughout the country. EPA will also provide assistance to three to five states in the design and execution of state-wide radon surveys, as well as to two Indian nations.

The national Radon Contractor Proficiency (RCP) Program will continue to evaluate the capability of mitigation firms and make the information available to the states and public. EPA will provide radon mitigation and prevention training through regional training centers; the House Evaluation Programs (HEPs), which provide hands-on radon measurement, mitigation, and prevention training to state personnel, private contractors, and home builders; the transfer of measurement and mitigation information to school officials through hands-on training and workshops; and the Radon Diagnostic and Mitigation Training Course. The Agency will complete national model building standards and release them to the public. The Agency will also work with building code organizations and local governments to promote the adoption of these standards.

The Agency will continue to operate the national Radon Measurement Proficiency (RMP) Program and provide information to the states and the public on the proficiency of measurement firms. EPA will also provide assistance to states in dealing with critical radon problems and will continue to develop the capabilities of state programs through oversight of the state grant program. The Agency will develop a national radon database and begin to operate a national radon information clearinghouse. The Agency will also promulgate user fee regulations and expects to begin collecting fees for its radon training and proficiency programs at the beginning of FY 1991.

EPA will issue the revised edition of the public information brochure, "A Citizen's Guide to Radon." The updated brochure will include information on health risks to special populations, costs and feasibility of radon mitigation, and a series of recommended action levels. The Agency will continue the national media campaign in cooperation with the Advertising Council and will develop a cooperative agreement with the American Lung Association to conduct public eduction and information programs. Other public information activities will include developing information and audiovisual materials for target audiences, co-sponsoring regional meetings with selected national organizations, and sponsoring a national radon symposium.

1990 Program

In 1990 the Agency is allocating a total of $12,359,900 supported by 49.5 total workyears for this program, of which $2,756,700 is from the Salaries and Expenses appropriation and $9,603,200 is from the Abatement, Control and Compliance appropriation.

In 1990 EPA is continuing to implement a comprehensive Radon Action Program to address and reduce the health impacts of radon exposure. Specific activities include completing the field operation and data collection phase of the national survey of radon in residences, completing the design of a national survey of radon in schools, developing protocols for measuring radon in schools, initiating development of measurement protocols for workplaces, and assisting Federal agencies with workplace studies. EPA is also continuing to assist individual states and Indian nations in the design and execution of surveys, including the collection of screening measurements in homes and the presentation of analyses of potentially high-risk radon areas to the public.

The Agency is also initiating the national RCP Program to evaluate the capability of firms to mitigate radon. EPA is assisting Federal agencies through mitigation training and continuing the transfer of measurement and mitigation information to school officials through hands-on training and workshops. Other radon mitigation and prevention activities include continuing the HEP, developing national model building standards, and offering three to five sessions of the Radon Diagnostic and Mitigation Training Course to augment the regional training center program.

EPA is also continuing the national RMP Program to assure consumers of the ability of firms to accurately measure radon levels. In addition, Agency is continuing efforts to develop the capabilities of state and local personnel through three regional training centers. In 1990 EPA will select at least one additional regional training center and establish it through a cooperative agreement. The Agency is also designing a national indoor radon database and a national radon information clearinghouse to collect and disseminate information on the radon problem.

EPA is developing technical and public information materials and making them available for distribution to state and Federal officials, the private sector, and homeowners. The Agency is continuing data evaluation and analysis to revise "A Citizen's Guide to Radon" and preparing a draft of the document. EPA will conduct a national media campaign in cooperation with the Advertising Council and continue regional meetings for health professionals with the American Medical Association (AMA). EPA/AMA are jointly developing a brochure on radon health effects for distribution this year. Finally, the Agency will propose a rule to establish user fees for services provided through the radon training and proficiency programs.

1989 Accomplishments

In 1989 the Agency obligated a total of $11,404,700 supported by 39.4 total workyears, of which $2,662,100 was from the Salaries and Expenses appropriation and $8,742,600 was from the Abatement, Control and Compliance appropriation.

EPA continued to implement the Radon Action Program to minimize the health risks of radon. Specific activities included continuing field work and data collection efforts associated with the national survey of radon in residences. The Agency also provided interim protocols for measuring and mitigating radon in schools and prepared for a national survey of radon in schools. EPA provided direct technical assistance to states, including assisting eight states in the design and conduct of intensive state-wide surveys.

In 1989 EPA continued to conduct the national RMP Program. In addition, the Agency developed the national RCP Program to evaluate radon mitigation firms and provide information to the public on the capability of firms working in the radon mitigation field. EPA also initiated the development of national model building standards for radon reduction in new construction.

The Agency established three regional training centers through cooperative agreements in 1989. EPA incorporated new technology into the HEP and evaluated and designed mitigation schemes for 20 homes in that program, through which nearly 200 state and private sector personnel were provided hands-on measurement and mitigation training. EPA also initiated similar training on a limited basis for school facility directors. The Agency updated the Radon Diagnostic and Mitigation Training Course and conducted seven sessions of the course in 1989.

The Agency developed technical and public information materials and made them available for distribution to state and Federal officials, the private sector, and homeowners. EPA also began data evaluation and analysis to revise "A Citizen's Guide to Radon." EPA and the AMA continued regional meetings for health professionals and initiated development of a joint EPA/AMA brochure on radon health effects.

RADIATION
Radon Action Program Implementation

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
				(DOLLARS IN THOUSANDS)		
PROGRAM						
Radon Action Program Implementation						
Salaries & Expenses		$795.8	$1,180.3	$1,410.5	$1,836.0	$425.5
	TOTAL	$795.8	$1,180.3	$1,410.5	$1,836.0	$425.5
TOTAL:						
Salaries & Expenses		$795.8	$1,180.3	$1,410.5	$1,836.0	$425.5
Radiation Program Implementation	TOTAL	$795.8	$1,180.3	$1,410.5	$1,836.0	$425.5
PERMANENT WORKYEARS						
Radon Action Program Implementation		15.2	27.3	28.2	37.7	9.5
TOTAL PERMANENT WORKYEARS		15.2	27.3	28.2	37.7	9.5
TOTAL WORKYEARS						
Radon Action Program Implementation		16.2	27.3	29.3	37.7	8.4
TOTAL WORKYEARS		16.2	27.3	29.3	37.7	8.4

RADIATION

Radon Action Program Implementation

Budget Request

The Agency requests a total of $1,836,000 supported by 37.7 total workyears for 1990, an increase $425,500 and 8.4 total workyears from 1990. All of the request will be for the Salaries and Expenses appropriation.

RADON ACTION PROGRAM IMPLEMENTATION

1991 Program Request

The Agency requests a total of $1,836,000 supported by 37.7 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $425,500 in the Salaries and Expenses appropriation and an increase of 8.4 total workyears from 1990. The increases reflect oversight required for the state grant and regional training center programs.

In 1991 Regional staff will continue to work through partnerships developed with states to implement the Agency's Radon Action Program. Regional staff will work with states to conduct EPA-assisted statewide surveys, and will help states that have completed their surveys to interpret the results and design effective follow-up programs. Three to five states and two Indian nations will conduct surveys in 1991, measuring radon levels in 7,000 to 10,000 homes. This will bring the number of Agency-assisted state surveys to approximately 35. The Regions will also continue to participate in the House Evaluation Programs (HEPs).

The Regions will be the focal point for implementation of the radon state grant program in 1991. Regions will review state grant applications against established criteria and will ensure that grant funds are used effectively.

The Regions will work with the Headquarters program, the states, and local governments in the design and implementation of surveys in schools and in workplaces, especially in Federal buildings, to further identify elevated radon levels. The Regions will provide direct oversight to the regional training centers, which also conduct testing for the national Radon Contractor Proficiency (RCP) Program. The Regions will also work with states and local governments for the adoption of radon building standards and will provide advice and assistance to states that want to establish additional consumer protection functions, such as licensing measurement and mitigation contractors.

The Regions will continue to provide information to states and members of the public. They will participate in or conduct educational programs, symposia, and workshops for state and local officials, contractors, and the public.

1990 Program

In 1990 the Agency is allocating a total of $1,410,500 supported by 29.3 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

In 1990 the Regional Offices are continuing to support implementation of the Radon Action Program by supporting the development of state and local radon capabilities and by coordinating radon activities at the state and local level. Regions are overseeing implementation of the Agency's new radon state grant program, including assisting states in their development of applications for Federal assistance, negotiating the grants, and reviewing states' use of grant funds. Additionally, EPA is assisting eight states in the design and execution of state-wide radon surveys. Through these surveys, states will collect screening measurements in 15,000 to 20,000 homes and the Regions will assist in making the results available to the public.

The Regions oversee the operation of regional training centers and arrange presentations of the Radon Diagnostic and Mitigation Training Course at selected locations. In 1990 the Regions are also assisting the states in their efforts to conduct the course independently. The Regions are participating in the HEP. The Regions are providing support to the states to help them address the most critical radon problems as they are discovered. This support is geared toward promoting state self-sufficiency. The Regions are also assisting in the distribution of EPA's public information materials and participating in numerous public awareness activities.

1989 Accomplishments

In 1989 the Agency obligated a total of $795,800 supported by 16.2 total workyears, all of which was from the Salaries and Expenses appropriation.

In 1989 Regional Offices continued to coordinate activities to support the implementation of the radon program by providing direct support to the states in the development of state capabilities. This included assistance in developing state survey designs, review of state plans for participation in the national assessment of indoor radon, assistance in the development of state radon capabilities, participation in the HEP, and technical advice and assistance to state and local governments.

The Regions assisted in the selection of sites for regional training centers and provided assistance to states in their development of applications to the state grant program which is issuing grants for the first time in 1990. The Regions also participated in the presentation of the Radon Diagnostic and Mitigation Training Course. The Regions provided support to states to deal with critical radon problems. The Regions also continued to assist in the distribution of public information materials, conduct outreach programs to the public and local agencies as part of a continuing radon educational program, and participate in radon public awareness activities.

RADIATION
Radon State Grants Program

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)			
PROGRAM						
Radon State Grants Program						
Abatement Control and Compliance			$984.6	$8,972.1	$9,000.0	$27.9
	TOTAL		$984.6	$8,972.1	$9,000.0	$27.9
TOTAL:						
Abatement Control and Compliance			$984.6	$8,972.1	$9,000.0	$27.9
Radon State Grants Program	TOTAL		$984.6	$8,972.1	$9,000.0	$27.9

RADIATION

Radon State Grant Program

Budget Request

The Agency requests a total of $9,000,000 for 1991, an increase of $27,900 from 1990. All of the request will be for the Abatement, Control and Compliance appropriation.

RADON STATE GRANT PROGRAM

1991 Program Request

The Agency requests a total of $9,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $27,900 in the Abatement, Control and Compliance appropriation from 1990. The increases are to provide additional direct funding to states.

In 1991 EPA will continue to issue grants to states to assist in the development and implementation of programs to assess and mitigate radon. State programs funded through these Federal grants will continue to include activities such as carrying out radon surveys; establishing radon assessment, mitigation, and control programs; developing public information and education materials; developing data storage and management systems; operating radon hotlines; and purchasing analytical equipment. In 1991, the second year of program, states must provide a 40 percent match to Federal funding.

Headquarters, in cooperation with the Regions, will continue to develop criteria used to evaluate states' use of grant funds. In 1991 this will include criteria for assessing state efforts to ensure the adoption of model building standards as directed in Section 306 of the Indoor Radon Abatement Act. The Agency will continue to provide national oversight of the grant program.

1990 Program

In 1990 the Agency is obligating a total of $8,972,100 for this program, all of which is from the Abatement, Control and Compliance appropriation.

In 1990, for the first time, EPA is issuing grants to states to assist them in the development and implementation of programs to assess and mitigate radon. State programs funded through these Federal grants include activities such as carrying out radon surveys; establishing radon assessment, mitigation, and control programs; developing public information and educational materials; developing data storage and management systems; operating radon hotlines; and purchasing analytical equipment. Headquarters, in cooperation with the Regions, is developing the specific criteria used to evaluate state grant applications and will oversee administration and evaluation of the national program.

1989 Accomplishments

This grant program is being initiated in 1990.

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MULTIMEDIA

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
APPROPRIATION					
Salaries & Expenses	$36,040.9	$41,702.9	$42,029.9	$54,146.6	$12,116.7
Abatement Control and Compliance	$9,698.2	$12,149.3	$11,918.4	$16,641.7	$4,723.3
Research & Development	$34,125.1	$69,773.2	$72,912.9	$95,631.1	$22,718.2
TOTAL, Multimedia	$79,864.2	$123,625.4	$126,861.2	$166,419.4	$39,558.2
PERMANENT WORKYEARS	598.2	776.0	723.1	841.5	118.4
TOTAL WORKYEARS	641.4	776.0	744.3	841.5	97.2
OUTLAYS	$66,049.9	$115,606.1	$115,082.1	$153,027.4	$37,945.3
AUTHORIZATION LEVELS	All authorization except for Research and Development is by virtue of the Appropriation Act. The Environmental Research, Development and Demonstration Act expired September 30, 1981. Reauthorization is pending.				

MULTIMEDIA

OVERVIEW AND STRATEGY

The Environmental Protection Agency's (EPA) Multimedia program is composed of activities that provide support to all media programs. Such support addresses environmental concerns that affect several media. This includes the multimedia research program, Federal agency environmental compliance program, the National Environmental Policy Act (NEPA) compliance program, and the legal support and criminal program of the Agency's enforcement activities.

Multimedia Research

The Multimedia Research Program consists of two major components: long-term "core" research and other multimedia research activities.

The Core Research program consist of four major research areas of focus in which the Agency is strengthening its long-term environmental research capabilities. These are:

1. Ecological risk,
2. Health risk,
3. Risk reduction, and
4. Exploratory research grants and academic research centers.

These areas are designed to: increase our knowledge and understanding of system-wide environmental problems; determine what impacts ecological changes have on human health, and improve our ability to anticipate and prevent pollution;

Specifically, the Ecological Risk area will define indicators to assess ecological health, collect statistics and other relevant data to define ecological quality trends and report on them periodically. The Health Risk area will develop dose-response and exposure models for estimating the effects of environmental pollution on humans. The Risk Reduction area will develop new tools and strategies for pollution prevention involving industry, state and local governments, communities, and individuals. The Exploratory Research Grants and Academic Centers area will provide support for long term exploratory environmental research through grants and academic research centers.

Other multimedia research activities will continue to: develop uniform risk assessment guidelines and coordinate with other agencies through the Risk Assessment Forum; provide production and transfer of technical and scientific information products; provide centralized guidance and management for the Agency's Quality Assurance efforts; promote the Visiting Scientist and the Small Business Innovative Research programs; support national and international cooperative efforts to understand pollutant exposures and human health effects and; ensuring that the Agency acquires state-of-the-art scientific instrumentation to produce quality research and attract and retain the highest quality researchers.

Abatement, Control, and Compliance

This Multimedia Program consist of two major activities to ensure multimedia environmental compliance by Federal organizations and related groups and promote transfer of technical information to organization outside EPA.

The Environmental Review and Coordination Program accomplishes statutory objectives of three authorities: the National Environmental Policy Act (NEPA); Clean Air Act, Section 309; and Executive Order 12088 - Federal Compliance with Pollution Control Standards. This program also includes four program activities to support Regional multimedia projects and EPA technology transfer activities. The NEPA compliance program assures EPA's actions comply with the intent of NEPA. This includes reviews of Agency programs that are not specifically covered by NEPA. The Federal facilities compliance program oversees Federal compliance with all Federal statutory environmental requirements, and specifically with Executive Order 12088. The Indians program develops and implements policies for dealing with environmental problems on Indian lands. Regional multimedia projects enable rapid response to unique environmental problems.

EPA's overall technology transfer activities are intended to improve efficiency and performance in environmental programs through technology transfer and information exchange.

Enforcement

The Enforcement Legal Support Program provides consistent direction to EPA enforcement activities for all non-Superfund and non-LUST media to ensure that all media enforcement programs contribute to the protection of environmental quality in the most effective manner possible. To accomplish this goal, this program establishes compliance monitoring and enforcement priorities, policies, and procedural guidelines so that enforcement actions are properly selected and prepared and establishes measures to ensure policies and procedures are correctly implemented by the media enforcement programs and Regional offices. It conducts all legal case development, litigation, and adjudicatory hearing activities for media enforcement programs, including oversight of evidence gathering, preparation and management of cases, and referral of cases to the Department of Justice for litigation.

In addition, this program contains the Agency's criminal investigations effort which investigates, prepares, and refers cases involving criminal violations of environmental statutes. Investigators and attorneys provide support to the Department of Justice during subsequent investigations and litigation of these cases.

The National Enforcement Investigations Center (NEIC) provides specialized technical expertise in support of EPA enforcement case preparation activities. NEIC serves as a point of coordination and support for complex investigations which have a national impact on environmental enforcement.

Consulting Services

Consulting services are used on an intermittent basis to supplement technical expertise in the Multimedia Research Program.

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MULTIMEDIA
Multimedia Research

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Scientific Assessment						
Salaries & Expenses		$2,357.2	$2,614.2	$2,585.0	$2,712.8	$127.8
Research & Development		$2,014.1	$4,769.7	$4,718.9	$1,844.8	-$2,874.1
	TOTAL	$4,371.3	$7,383.9	$7,303.9	$4,557.6	-$2,746.3
Quality Assurance Management						
Salaries & Expenses		$826.3	$887.9	$875.9	$951.9	$76.0
Research & Development		$845.5	$821.0	$812.3	$1,808.9	$996.6
	TOTAL	$1,671.8	$1,708.9	$1,688.2	$2,760.8	$1,072.6
Technical Information & Liaison						
Salaries & Expenses		$4,856.3	$5,395.2	$5,365.6	$6,020.0	$654.4
Research & Development		$4,929.7	$3,031.7	$4,882.7	$5,352.7	$470.0
	TOTAL	$9,786.0	$8,426.9	$10,248.3	$11,372.7	$1,124.4
Health Effects						
Salaries & Expenses					$482.5	$482.5
Research & Development					$1,115.8	$1,115.8
	TOTAL				$1,598.3	$1,598.3
Core Research - Health Risk						
Salaries & Expenses					$1,745.0	$1,745.0
Research & Development					$12,209.8	$12,209.8
	TOTAL				$13,954.8	$13,954.8
Human Exposure						
Salaries & Expenses		$122.8	$845.3	$933.9		-$933.9
Research & Development		$198.9	$3,209.3	$3,175.1		-$3,175.1
	TOTAL	$321.7	$4,054.6	$4,109.0		-$4,109.0
Reducing Uncertainties in Risk Assessments						
Salaries & Expenses		$294.2	$274.0	$270.4		-$270.4
Research & Development		$9,943.6	$9,845.0	$9,740.2		-$9,740.2
	TOTAL	$10,237.8	$10,119.0	$10,010.6		-$10,010.6
Multimedia Activities						
Salaries & Expenses					$410.9	$410.9
Research & Development					$2,695.0	$2,695.0
	TOTAL				$3,105.9	$3,105.9
Core Research - Grants and Centers						
Salaries & Expenses					$1,437.6	$1,437.6
Research & Development					$32,839.9	$32,839.9
	TOTAL				$34,277.5	$34,277.5

MULTIMEDIA
Multimedia Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Exploratory Research					
Salaries & Expenses	$946.0	$1,135.7	$1,155.1		-$1,155.1
Research & Development	$16,193.3	$24,257.6	$23,998.6		-$23,998.6
TOTAL	$17,139.3	$25,393.3	$25,153.7		-$25,153.7
Core Research - Ecological Risk					
Salaries & Expenses				$1,572.3	$1,572.3
Research & Development				$25,114.2	$25,114.2
TOTAL				$26,686.5	$26,686.5
Ecological Status And Trends					
Salaries & Expenses		$784.1	$1,023.5		-$1,023.5
Research & Development		$16,947.4	$16,766.9		-$16,766.9
TOTAL		$17,731.5	$17,790.4		-$17,790.4
Core Research - Risk Reduction					
Salaries & Expenses		$212.9	$210.1	$425.0	$214.9
Research & Development		$2,953.5	$2,922.1	$4,200.0	$1,277.9
TOTAL		$3,166.4	$3,132.2	$4,625.0	$1,492.8
Capital Investments					
Research & Development		$3,938.0	$5,896.1	$8,450.0	$2,553.9
TOTAL		$3,938.0	$5,896.1	$8,450.0	$2,553.9
TOTAL:					
Salaries & Expenses	$9,402.8	$12,149.3	$12,419.5	$15,758.0	$3,338.5
Research & Development	$34,125.1	$69,773.2	$72,912.9	$95,631.1	$22,718.2
Multimedia Research TOTAL	$43,527.9	$81,922.5	$85,332.4	$111,389.1	$26,056.7
PERMANENT WORKYEARS					
Scientific Assessment	35.2	44.1	39.0	40.1	1.1
Quality Assurance Management	11.6	14.5	14.5	14.5	0.0
Technical Information & Liaison	54.3	72.0	72.0	72.0	0.0
Core Research - Health Risk				19.0	19.0
Human Exposure	.7	13.0	13.0		-13.0
Reducing Uncertainties in Risk Assessments	1.7	4.0	4.0		-4.0
Multimedia Activities				4.0	4.0
Core Research - Grants and Centers				12.0	12.0

MULTIMEDIA
Multimedia Research

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Exploratory Research	13.9	15.0	15.0		-15.0
Core Research - Ecological Risk				14.0	14.0
Ecological Status And Trends		12.0	12.0		-12.0
Core Research - Risk Reduction		4.0		5.0	5.0
TOTAL PERMANENT WORKYEARS	117.4	178.6	169.5	180.6	11.1
TOTAL WORKYEARS					
Scientific Assessment	39.1	44.1	39.0	40.1	1.1
Quality Assurance Management	11.9	14.5	14.5	14.5	0.0
Technical Information & Liaison	58.8	72.0	72.0	72.0	0.0
Core Research - Health Risk				19.0	19.0
Human Exposure	.7	13.0	13.0		-13.0
Reducing Uncertainties in Risk Assessments	2.9	4.0	4.0		-4.0
Multimedia Activities				4.0	4.0
Core Research - Grants and Centers				12.0	12.0
Exploratory Research	14.0	15.0	15.0		-15.0
Core Research - Ecological Risk				14.0	14.0
Ecological Status And Trends		12.0	12.0		-12.0
Core Research - Risk Reduction		4.0		5.0	5.0
TOTAL WORKYEARS	127.4	178.6	169.5	180.6	11.1

MULTIMEDIA

Multimedia Research

Principal Outputs by Objective

Objective 1: Uniform Risk Assessments

1991: o Final guidelines for neurotoxicity and final guidance for non-cancer health effects and cancer.

o Initial guidelines on pharmacokinetics and ecotoxicity.

o Agency-wide implementation/training program for the enhanced IRIS delivery system.

1990: o Final guidelines for exposure measurements and for male and female reproductive effects.

o Final amendments for guidelines on developmental toxicity.

o Proposed guidelines for neurotoxicity, quantitative guidance for non-cancer health effects and amendments to the cancer guidelines.

o Risk Assessment Forum analyses of specific risk assessment issues.

o Additional EPCRA right-to-know chemicals to IRIS.

1989: o Proposed amendments to current guidelines for exposure measurements and for developmental toxicity.

o Inhalation reference doses added to IRIS.

o Risk Assessment analyses of specific risk assessment issues.

Objective 2: Lead Abatement

1990: o Lead exposure abatement planning document.

o Progress report on the status of projects to reduce lead and human exposure.

1989: o No program in 1989.

Objective 3: Quality Assurance Program

1991: o Supplementary guidance on Data Quality Objectives.

o Two QA Management Systems Reviews of major EPA environmental data operations.

- o 25 QA Program Plans reviewed.
- o Three QA training courses developed.
- o Preliminary report on Audit of Data Quality protocols.

1990: o Two QA Management Systems Reviews of major EPA environmental data operations.

- o 25 QA Program Plans reviewed.
- o Three QA training courses developed.
- o Final version of glossary of QA terminology.
- o Pilot of alternative procedures for QC optimization in a chemistry laboratory.

1989: o Management Systems Review of a major EPA environmental data operation

- o 25 QA Program Plans reviewed.
- o Two QA training courses developed.
- o Draft version of glossary of QA terminology.
- o Alternative procedures for QC optimization in a chemistry laboratory.

Objective 4: Regional Analytical Methods

1991: o Report to the Environmental Monitoring Management Council on Regional methods activities.

- o Regional Action Plan: Research needs and priorities.
- o Work Plan for Regional Methods Program.

1990: o No program in 1990.

Objective 5: Technology Transfer

1991: o Series of industry-specific clean technology application guides providing information and research results on clean technology and waste reduction applications.

- o Handbook on Municipal Sludge Landfills.
- o Handbook presenting Best Available Control Technology (BACT) information on air pollutants harmful to human health but not regulated.

1990: o Seminar series on the statistical procedures used to detect groundwater contamination at hazardous waste facilities.

o Workshops on the use of the expert system for evaluating and improving POTW performance.

o Handbook on toxic air pollutant risk assessment and control alternatives.

1989: o Seminar series on innovative technologies for municipal wastewater treatment facilities.

o Handbook on sampling and analysis methods for toxic emissions from incinerators.

o Seminar series and publication on how to conduct sanitary surveys of small drinking water treatment facilities.

Objective 8: Task Force on Environmental Cancer and Heart and Lung Disease

1991: o Proceedings of the Second National Conference on Risk Communications.

1990: o Workshop Report on exposure to pesticides.

o Proceedings of the workshop on environmental and occupational asthma.

1989: o Workshop proceedings on effective risk communications: Governmental and non-governmental roles.

Objective 9: Harvard Study

1989: o Variations in susceptibility to inhaled pollutants: Identification, mechanisms, and policy implications.

Objective 10: China Program

1991: o Report on lung cancer risk due to indoor air pollution in Xuan-Wei, China.

1990: o Interim report on chemical indoor air pollution constituents associated with lung cancer in Xuan-Wei, China.

Objective 11: NHANES-III

1991: o Annaul Status Report on NHANES-III Cooperative Research

1990: o Annaul Status Report on NHANES-III Cooperative Research

1989: o Annaul Status Report on NHANES-III Cooperative Research

Objective 12: Human Exposure

1991: o Final report on TEAM Study of particles and metals.

o Report on breath analysis in high exposure sources.

1990: o Completion of continuous personal monitor for NO_2.

1989: o Final report on NOPES Study of exposure to household pesticides.

o Final report on TEAM Studies of VOCs in Los Angeles, Baltimore, and New Jersey.

Objective 13: Reducing Uncertainties In Risk Assessments (RURA-Health)

1991: o Annual Report on the RIHRA research program.

1990: o Research Program Strategy to Improve Health Risk Assessments.

o Initial research in the areas of human exposure assessment and characterization of uncertainties in health risk assessment.

1989: o Integrated approach to evaluate/characterize the uncertainties in risk assessments.

o Research Plan to Improve Health Risk Assessments program Research Plan.

Objective 14: Epidemiology Research Center

1991: o Cooperative Agreement for epidemiology research center.

1990: o No program in 1990.

Objective 15: Visiting Scientists Program

1991: o Solicitation and selection of scientists and engineers for 1991 Visiting Scientists and Engineers Program.

o Solicitation and selection of candidates for 1991 Environmental Science and Engineering Fellows Program.

1990: o Solicitation and selection of scientists and engineers for 1990 Visiting Scientists and Engineers Program.

o Solicitation and selection of candidates for 1990 Environmental Science and Engineering Fellows Program.

1989: o 4 visitors under the Visiting Scientists and Engineers Program.

o 10 science or engineering fellows under the Environmental Science and Engineering Fellows Program.

o Annual Report on Visiting Scientist Program.

Objective 16: Small Business Innovative Research Program

1991: o Solicitation of proposals.

o Summary of Phase I and Phase II abstracts.

1990: o Solicitation of proposals.

o Summary of Phase I and Phase II abstracts.

1989: o Award of 27 Phase I (feasibility) and 12 Phase II (development) contracts.

o Published summary of abstracts.

Objective 17: Exploratory Research Grants

1991: o Solicitation of 1991 research grants proposals.

o Annual report on Exploratory Research Grants Program.

o Bibliography of research grant articles published.

1990: o Solicitation of 1990 research grants proposals.

o Annual report on Exploratory Research Grants Program.

o Bibliography of research grant articles published.

1989: o Awarded 64 new Exploratory Research Grants.

o Published over 100 technical articles in journals.

o Annual report on Exploratory Research Grants Program.

Objective 18: Academic Research Centers

1991: o Selection of new Academic Research Centers.

o Annual report on Academic Research Centers Program.

1990: o Prepare solicitation for new centers.

- o Annual report on Academic Research Centers Program.

1989: o Annual report on Academic Research Centers Program.

Objective 19: Ecological Monitoring and Assessment

1991: o Final Program Plan For Gulf Of Mexico Project.

o Draft Report On The Gulf Of Mexico Project Implementation Plan for Forest Monitoring and Assessment.

o Implementation Plan for Agroecosystem Monitoring and Assessment.

o Implementation Plan for Desert, Grassland, and Rangeland Monitoring and Assessment.

o Annual Report On Forest Pilot Project in the Northeastern U.S.

1990: o Assessment of Surface Water Ecosystem Condition.

o Draft Program Plan for the Gulf of Mexico Project.

o Final Research Plan For EMAP Near-Coastal Monitoring and Assessment Program.

o Quality Assurance Program Plan for EMAP.

o Assessment for Forest Ecosystems.

o Assessment for Desert, Rangeland, and Grassland Ecosystems.

1989: o Preliminary evaluation of ecosystem classification schemes.

o Research plan for evaluating condition of ecosystems.

o Development of an integrated approach to reduce uncertainties in ecological risk assessment.

Objective 20: Reducing Uncertainties in Risk Assessments (RURA-Ecological)

1991: o Final Report On The Near-Coastal Demonstration Project in the Virginian Province.

o Integrated Research Plan for The Development Of Assessment And Management Tools To Reduce Uncertainties In Ecological Risk Assessment.

1990: o Demonstration Assessment for Near-Coastal Systems in the Virginian Province.

o Final Sampling Plan For The Near Coastal Demonstration Project.

- Data management system for near coastal demonstration project.
- Implementation Plan For Near Coastal Demonstration Project.
- Final Research Plan: Reducing Uncertainties in Ecological Risk Assessment.

1989:
- Conceptual Overview for the Environmental Monitoring and Assessment Program.
- Draft Research Plan: Reducing Uncertainties In Ecological Risk Assessment. (RUERA)

Objective 21: Pollution Prevention

1991:
- Study on environmental impacts of consumer products to determine if labelling can be used to identify clean products.
- Study on promoting pollution prevention and environmental eduction in secondary schools.
- Study on alternatives for some ozone depleting chemicals to determine if recycling and/or substitutes are available.

1990:
- Expanded Pollution Prevention Information Clearinghouse including the hardcopy repository, telephone hotline and electronic information exchange system.
- Measurement methodology for hazardous/non-hazardous pollution prevention.
- Product specific projects initiated on preventing indoor air quality problems from building materials and household products.

1989:
- No program in 1989.

Objective 22: Information and Communications

1991:
- Cooperative Agreements.

1990:
- Research Plan for Information and Communications Program.
- Solicitation for 1991 research and development projects.

1989:
- No program in 1989.

MULTIMEDIA

Multimedia Research

Budget Request

The Agency requests a total of $111,389,100 supported by 180.6 total workyears for the Multimedia (formerly the Interdisciplinary) Research program in 1991. This is an increase of $26,056,700 and an increase of 11.1 total workyears from 1990. Of the total request, $15,758,000 will be for the Salaries and Expenses appropriation and $95,631,100 will be for the Research and Development appropriation, an increase of $3,338,500 in the Salaries and Expenses appropriation and an increase of $22,718,200 in the Research and Development appropriation.

Program Objectives

The Multimedia Research budget subactivity consists of research programs which provide support to all program medias. These research programs include: Uniform Risk Assessments, Quality Assurance Management, Technical Information, Health Effects, Core Research Program (Ecological Risk, Health Risk, Risk Reduction, and Grants and Centers), and Capital Investments.

In 1991, EPA proposes a major reorganization within the Multimedia research program to better define research activities that are related to general multimedia support (e.g. Uniform Risk Assessments, Technology Transfer, Health Effects) and the new multimedia long-term research program (e.g. Core Research).

Objective 1: Uniform Risk Assessments. This research activity provides Agency-wide guidance to perform exposure and risk assessments. These guidelines are intended to ensure uniform assessments that rely on sound scientific principles and information.

Objective 2: Lead Abatement. This new research supports understanding and abatement techniques for lead primarily in paint, soils and drinking water.

Objective 3: Quality Assurance Program. This program provides policy direction, management guidance and oversight for the Agency's quality assurance program for environmental data operations.

Objective 4: Regional Analytical Methods. This new research program will evaluate, standardize and further develop analytical technologies that support Regional programs, while avoiding duplication and being consistent with the Agency's overall approach toward method development.

Objective 5: Technology Transfer. This program supports activities authorized under the Technology Transfer Act of 1986 (P.L. 99-502). This activity supports the development and delivery of technical information tools to Regions, States, counties, municipalities, Indian tribes, and media program offices.

Objective 6: Technical Information Product Management. This program provides overall management and coordination of technology transfer and technical information activities related to research. This program facilitates the use of EPA research products and services and ensures the integration of Agency scientific and technical priorities among research offices and laboratories.

Objective 7: Regulatory Support. This research activity is responsible for ensuring the scientific quality of the Agency's regulations is scientifically sound. This is conducted through ORD participation in Agency regulatory work groups, review of alternative regulatory approaches, and continual analysis of regulatory requirements so that research programs are responsive to program and Regional office needs.

Objective 8: Task Force on Environmental Cancer and Heart and Lung Disease. This interagency task force was established by the Clean Air Act of 1977 to promote coordination and recommend research to determine and quantify the relationship between environmental factors and human diseases.

Objective 9: Harvard Study. This research activity supports the Harvard School of Public Health's Interdisciplinary Programs in Health. The primary objective of this program is to enlist scholars from the natural and social sciences to direct their energies toward finding new and better ways to address the most critical environmental problems facing society.

Objective 10: China Program. This research activity supports the United States' policy of scientific and technological cooperation with the People's Republic of China (PRC) as reflected in the 1980 US-PRC Environmental Protection Protocol.

Objective 11: National Health and Nutrition Examination Survey (NHANES-III). The third National Health and Nutrition Examination Survey is one of a series of studies conducted by the National Center for Health Statistics (NCHS) as a joint Federal effort to obtain health and nutrition data on a statistically representative sample of Americans.

Objective 12: Human Exposure. This research activity provides the methods, monitoring approaches and models to determine and predict the exposures of human populations to environmental pollutants with known precision.

Objective 13: Reducing Uncertainties In Health Risk Assessments (RURA-Health). This research activity, also called Research to Improve Health Risk Assessments (RIHRA), supports an integrated effort to reduce the uncertainties in and improve health risk assessment approaches.

Objective 14: Center for Environmental Epidemiology Research. This new research center provides comprehensive and systematic research to define, improve, and apply environmental epidemiology to improve regulatory decision making.

Objective 15: Visiting Scientists Program. This research activity develops and implements programs to enhance the quality and reputation of the Agency's research by attracting outside researchers to EPA facilities to collaborate with Agency researchers. It currently has two major elements: a Visiting Scientists and Engineers Program (VSEP) and an Environmental Science and Engineering Fellows Program (ESEFP). The major differences between the two are in the length of assignment and in the level of relevant experience required of participants.

Objective 16: Small Business Innovation Research (SBIR) Program. This program is mandated by the Small Business Innovation Development Act (P.L. 97-219) which requires EPA to set aside 1.25 percent of the Agency's Research and Development Appropriation to support small businesses engaged in developing equipment for pollution abatement and control and instrumentation for environmental monitoring.

Objective 17: Exploratory Research Grants. This research program supplements the fundamental scientific knowledge base crucial to sound applied environmental research. This is done by funding investigator-initiated environmental research proposals selected through a competitive peer review process. Support is provided in five general areas: environmental health, ecology and environmental biology, environmental engineering, air chemistry and physics, and water chemistry and physics.

Objective 18: Academic Research Centers. EPA Academic Research Centers provide multi-year research in defined areas of interest to the Agency. Research is carried out in a university setting.

Objective 19: Ecological Monitoring and Assessment. This research activity provides basic research, monitoring, and data gathering and manipulation to report periodically on the status, changes, trends and relationships among pollutant exposures and indicators of ecological conditions in the nation's ecosystems.

Objective 20: Reducing Uncertainties In Ecological Risk Assessments (RURA-Eco). This research activity supports an integrated approach to develop a better understanding of the structure and function of ecosystems in an effort to reduce the uncertainties associated with ecological risk assessments.

Objective 21: Pollution Prevention. This research program supports EPA's multimedia pollution prevention program. To develop the necessary information for implementation of effective national/ international pollution prevention programs, activities will be supported in six major areas: product research, process research, recycling and reuse research, socioeconomic and institutional research, anticipatory research, and technology transfer and technical assistance.

Objective 22: Information and Communications Program. This research activity provides information on alternative approaches to control pollution problems. The current regulatory approach (traditional command and control) is not appropriate for several of the emerging environmental problems (i.e., radon, global climate change, non-point source). Research will be conducted in five major areas: risk communication, incentives and disincentives, new technologies for information dissemination, technology commercialization and utilization, and education/training.

Objective 23: Capital Investments Program. This program activity provides EPA research laboratories with scientific equipment necessary to conduct investigations and analyses in a safe and timely manner with state-of-the-art research instrumentation and components available. This equipment enables ORD to recruit and nurture the highest quality scientists and engineers to conduct EPA's research activities.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $4,557,600 supported by 40.1 total workyears for this program, of which $2,712,800 will be for the Salaries and Expenses appropriation and $1,844,800 will be for the Research and Development appropriation. This represents an increase of $127,800 and a decrease of $2,874,100 respectively with an increase of 1.1 workyears. The increase in the Salaries and Expenses appropriation reflects additional support for Risk Assessment Forum activities. The decrease in the Research and Development appropriation reflects no further funding requested for lead abatement research until the Agency's lead abatement plan is developed in 1990.

Uniform Risk Assessments. Risk assessment guidelines proposed during 1990 (e.g., neurotoxicity, quantitative guidance for non-cancer health effects, and cancer) will be issued as final guidance. New guidance related to pharmacokinetics and ecotoxicity will be developed. The Risk Assessment Forum will undertake projects designed to resolve difficult issues raised during the guidelines review. Reports that result will serve as supplements to these guidelines.

Emphasis in the Integrated Risk Information System (IRIS) will be on providing an Agency-wide implementation/training program for the enhanced IRIS delivery system. This will include communicating mixture toxicity and expanding the data base. An additional 160 chemical assessments will be added to the data base. Emphasis will be placed on comparison/validation of exposure assessment techniques. Continued development of the Compact Disk-Read Only Memory (CD-ROM) will contribute to this goal by establishing a comprehensive and conveniently searched and used data base for exposure assessment.

Lead Abatement. Research will continue research activities begun in 1990 on: lead based paint abatement; lead exposure analysis; biochemical and physiological indicators; toxicological and epidemiological studies; drinking water exposure; and the movement of lead through industrial processes. The Agency's Task Force on Lead Abatement will review this research and help define what future research is needed on lead abatement exposure reduction and related health effects.

1990 Program

In 1990, the Agency has allocated a total of $7,303,900 supported by 39.0 total workyears for this program, of which $2,585,000 is from the Salaries and Expenses appropriation and $4,718,900 is from the Research and Development appropriation.

For uniform risk assessments, new final guidelines are published for exposure measurements, male and female reproductive effects, and amendments for the 1986 developmental toxicity guidelines. New guidelines are proposed for neurotoxicity, quantitative guidance for non-cancer health effects, and amendments to the cancer guidelines issued in 1986. Forum reports on risk assessment issues (e.g., use of human evidence in carcinogen risk assessment, acceptability and interpretation of dermal developmental toxicity studies, and one vs. two-generation reproductive effects studies) are to be issued as final documents.

For lead abatement, research projects have been selected to better understand the risks from and controls for lead in the environment. Research is being conducted on: new technologies for controlling exposure to lead based paint; relationships of paint to dust; disposal alternatives for paint abatement debris; bioavailability of lead in paint and soil; lead exposure through soil; prenatal transplacental transfer of lead; proteins that bind lead; bone biokinetics of lead; movement of lead through groundwater; and lead particulates in drinking water. These research efforts are multi-year in scope and will continue through 1991.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,371,300 supported by 39.1 total workyears for this program, of which $2,357,200 was from the Salaries and Expenses appropriation and $2,014,100 was from the Research and Development appropriation. Guidelines for exposure measurements and for amendments of the 1986 developmental toxicity guidelines were prepared. The Risk Assessment Forum issued a workshop report on EPA guidelines for carcinogen risk assessment and interim procedures for estimating risks associated with exposures to mixtures of chlorinated dibenzo-p-dioxins and dibenzofurans. Inhalation reference doses were added to the Integrated Risk Information System data base. A program to begin the evaluation of exposure uncertainties was begun.

QUALITY ASSURANCE MANAGEMENT

1991 Program Request

The Agency requests a total of $2,760,800 supported by 14.5 total workyears for this program, of which $951,900 will be for the Salaries and Expenses appropriation and $1,808,900 will be for the Research and Development appropriation. This represents an increase of $76,000 and $996,600 respectively with no increase in workyears. The increase in the Salaries and Expenses appropriation reflects an enhancement of inhouse support for the Quality Assurance Program. The increase in the Research and Development appropriation reflects initiation of a systematic program to assist the Regions in developing analytical methods.

Quality Assurance Program. The mandatory Agency-wide Quality Assurance (QA) program will provide policy guidance, technical support, and oversight to assure that environmental data provided to Agency decision makers are of the quality needed and claimed. The Quality Assurance Management Staff will assist 50 EPA organizations which carry out environmental data operations, to assure that these operations produce data of the type and quality which Agency managers need to make decisions.

Specific activities will include: development of supplementary guidance on Data Quality Objectives; support to EPA organizations pursuing the Data Quality Objectives process; initial development on a protocol for audits of data quality; QA Management Systems Reviews focusing on major EPA data operations; reviews of 25 QA Program Plans submitted by EPA offices and laboratories; development of QA training courses; continuing development of guidance on QA common practices; and preparation of a report to senior management on the status of the Agency's Quality Assurance Program.

Regional Analytical Methods. An action plan will be developed by the Regions which will identify their highest priority analytical methods research needs. The Office of Research and Development (ORD) will respond with a work plan to meet these needs. This process will be institutionalized as part of the activities of the Agency-wide Environmental Monitoring Management Council (EMMC). Emphasis will be placed on needs currently hampering the implementation or monitoring of regulatory programs. This effort will evaluate both laboratory and field methods to determine their applicability.

1990 Program

In 1990, the Agency allocated a total of $1,688,200 supported by 14.5 total workyears for this program, of which $875,900 is from the Salaries and Expenses appropriation and $812,300 is from the Research and Development appropriation. Quality assurance activities involve the implementation and evaluation of programs to support the development of Agency data which are adequate for internal use.

The 1990 program goal is to institutionalize within the Agency three basic quality assurance tools: (1) Data Quality Objectives; (2) Management Systems Reviews; and (3) QA Program Plans. The Quality Assurance Management Staff is pursuing this goal by means of a variety of ongoing programs involving guidance development, training, and technical support. Specific activities and outputs are comparable to those planned for 1991.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,671,800 supported by 11.9 total workyears for this program, of which $826,300 was from the Salaries and Expenses appropriation and $845,500 was from the Research and Development appropriation. Accomplishments in 1989 included: the review of 25 QA Program Plans; performance of QA Management Systems Reviews; support to Agency organizations implementing the Data Quality Objectives process; documentation of alternative procedures for measurement method validation and laboratory quality control; quality assurance training program development; drafting a glossary of QA terminology; and preparing a status report to senior EPA management.

TECHNICAL INFORMATION AND LIAISON

1991 Program Request

The Agency requests a total of $11,372,700 supported by 72.0 total workyears, of which $6,020,000 will be for the Salaries and Expenses appropriation and $5,352,700 will be for the Research and Development appropriation. This represents an increase of $654,400 and $470,000 respectively with no change in workyears. Both of these increases represent an expansion of the technology transfer and Regional liaison activities to enhance scientific and technical knowledge of environmental protection.

Technology Transfer. Technology transfer is a process which responds to the scientific and technological information needs of the Regions, States, counties, municipalities, American Indian tribal governments, and client program offices. Available technology and technical data will be disseminated to States and localities to enable them to meet their regulatory, enforcement and pollution prevention responsibilities. Products and services include: user guides; design manuals; handbooks; training seminars; and workshops. Also the ORD Regional Scientist Program which will continue to provide "on-site" assistance to Regions in identifying and addressing the applied research and technical support needs of the enforcement and regulatory community. The Regional Applied Research Effort (RARE) will accelerate ORD's response to more immediate high priority applied research needs in the Regions.

Technical Information Product Management. The overall management of technical information and technology transfer is an ongoing responsibility. Therefore, in 1991, this program will continue to facilitate the use of ORD products and services by promoting the timely transfer of appropriate technology and technical information to other Federal, State and local users. The program will continue to ensure the integration of Agency scientific and technical priorities across the ORD offices and laboratories. the Center for Environmental Research Information (CERI) will continue to perform the many functions that it has in previous years (e.g. processing and distributing ORD reports; producing project summaries; and coordination with NTIS). The National Environmental Technology Application Corporation (NETAC) will expand its solicitations and review of candidate technologies. Optimal use of NETAC facilities will be promoted. The hazardous materials handling and testing facilities offer unique features to potential commercial-scale technology developers and will become available in 1991. An increased number of environmental technologies will be brought to commercialization and "venture capital" will be secured.

Two activities will be initiated in 1991 to support the Agency's Pollution Prevention Program. The first activity will deliver required pollution prevention information and technology to small and medium sized industries and municipalities. The second activity is designed to assist in the establishment of pollution prevention centers at universities across the nation.

Regulatory Support. This program will continue to ensure that EPA research focuses on the most critical scientific and engineering issues associated with the Agency's regulatory development process, and that scientific uncertainties are fully documented for use by Agency policy makers.

1990 Program

In 1990, the Agency is allocating a total of $10,248,300 supported by 72.0 total workyears for this program, of which $5,365,600 is from the Salaries and Expenses appropriation and $4,882,700 is from the Research and Development appropriation. The program continues to provide overall management and coordination of ORD technology transfer and technical information activities to promote positive interactions among ORD offices and laboratories and ORD's clients. This program supports the development and delivery of ORD products, services and information tools. Ongoing activities in the regulatory support area focus on participation in Agency regulatory workgroups and continual analysis of Agency regulatory scientific requirements.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,786,000 supported by 58.8 total workyears for this program, of which $4,856,300 was from the Salaries and Expenses appropriation and $4,929,700 was from the Research and Development appropriation.

The Regional Scientist program provided Regional Offices with senior ORD liaisons who serve as science advisors and "gateways" to the broad spectrum of available ORD resources. NETAC continued to develop solicitations to attract top candidates for commercialization of environmental technologies. The regulatory support program helped to ensure technically sound development of Agency regulations. Over 1,000 ORD documents and reports to ORD clients and the production of over 350 project summaries were tracked, processed and distributed. The Center for Environmental Research Information (CERI) responded to over 30,000 requests for information.

THE NEXT FOUR (4) PROGRAM ELEMENTS HAVE BEEN REORGANIZED IN 1991 TO BETTER MANAGE MULTIMEDIA HEALTH RESEARCH ACTIVITIES WITH THE NEW "CORE RESEARCH" PROGRAM.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $1,598,300 supported by no workyears for this new program, of which $482,500 will be for the Salaries and Expenses appropriation and $1,115,800 will be for the Research and Development appropriation. This activity reflects the transfer of similar Multimedia research activities from the "Exploratory Research" program element.

Task Force on Environmental Cancer and Heart and Lung Disease. This Task Force will continue to evaluate the link between environmental factors and human diseases. Research recommendations will be provided by the Task Force to the Agency based on research needs identified by scientists. A national risk communications conference will be held in 1991.

Harvard Study. This research study will continue to identify and select post-doctoral research fellows and visiting scientists to work with Harvard faculty members on research projects that address critical environmental problems that face society.

China Program. This program, conducted under the 1980 US-PRC Environmental Protection Protocol, will begin to shift research from the study of lung cancer and indoor coal smoke pollution in a rural setting (Xuan-Wei) to a study of children's respiratory health across a wide gradient of particulate, acid, and sulfur oxide exposures in several Chinese cities. The focus in 1991 will be on a multi-city study of children's lung function and respiratory health. Efforts will continue in the area of environmental processes and effects of pollution on freshwater organisms, water pollution fate and transport modeling, and groundwater pollution processes.

1990 Program

The program activities in 1990 are described in other program elements as follows:

1. Task Force on Environmental Cancer and Heart and Lung Disease is described in the "Exploratory Research" program element of this Multimedia research program.

2. Harvard Study is described in the Drinking Water and Toxics Research media.

3. China Program is described in Water Quality, Drinking Water and the Air Research media.

1989 Accomplishment

1989 accomplishments for these program activities are described in the same program elements in 1989 as in 1990.

CORE RESEARCH-HEALTH RISK

1991 Program Request

The Agency requests a total of $13,954,800 for this new program supported by 19.0 total work years, of which $1,745,000 will be for the Salaries and Expenses appropriation and $12,209,800 will be for the Research and Development appropriation.

NHANES-III. This multi-year and multi-agency survey will continue. Efforts will focus on estimating the prevalence of disease and functional impairment, providing accurate data on the distribution of health characteristics such as growth and development, monitoring secular changes in disease, and identifying new risk factors for disease. EPA participation will help develop baseline data on measures of pulmonary function and neurobehavioral parameters. These data will be linked to various biological measures of exposure and questionnaire responses will allow an analysis of relationships between these functions and possible environmental factors.

Human Exposure. The Human Exposure program will complete the total exposure assessment methodology (TEAM) study of exposure to inhalable particles in a California city. Field work on the major survey to determine exposure-related activity patterns of the population will also be completed. Measurement methods for determining exposure to polar organics, ozone, polyaromatic hydrocarbons, and other pollutants will be developed. New microenvironments will be studied. Breath analysis and other biomarkers of exposure will be investigated.

Reducing Uncertainties in Health Risk Assessments (RIHRA). This program will continue to conduct research to improve health risk assessments in the areas of assessing uncertainty, exposure assessment, physiologically based pharmacokinetic modeling and biologically based dose response modeling. First research results are expected in a number of these topics in 1991.

Center for Environmental Epidemiology Research. This center responds to a major recommendation of the EPA Science Advisory Board which indicated that the agency should initiate a program of epidemiologic research. The new EPA Center for Environmental Epidemiology will be established to develop, validate, and apply epidemiologic methods to assess the status of public health, to identify potential and emerging problems, and to evaluate the efficacy of risk reduction measures.

1990 Program

The program activities in 1990 are described in other program elements as follows:

1. NHANES-III is described in the Air Research media.
2. Human Exposure is described in the "Human Exposure" program element within this Multimedia research program.
3. Reduction of Uncertainties in Risk Assessment (RIHRA) - Health is described in the "Reduction of Uncertainties in Risk Assessment" program element within this Multimedia research program.

1989 Accomplishments

1989 accomplishments for these program activities are described in the same program elements in 1989 as in 1990.

HUMAN EXPOSURE

1991 Program Request

No resources are requested in 1991 for activity in this program element since this activity is being reorganized into the new "Core Research - Health Risk" program element within this Multimedia research program.

1990 Program

The Agency is allocating a total of $4,109,000 supported by 13.0 total workyears for this program. Of this total, $933,900 is from the Salaries and Expenses appropriation and $3,175,100 is from the Research and Development appropriation.

This program focuses on research and evaluation of human exposure to environmental pollutants from all sources. In 1990, research activity will include a major survey to determine the activity patterns of the population including lifestyles and use of consumer products. Also included are several studies on microenvironments (home, work, transportation) of human exposure. Methods for evaluating exposures to volatile organics associated with major sources will be instituted. The existing TEAM (Total Exposure Assessment Methodology) Program will continue to provide direct measures of human exposures to make real life estimates of exposures. Data from each component of the program will be used to develop models of human exposure that can be used for extrapolation to entire populations at risk.

1989 Accomplishments

In 1989, the Agency obligated at total of $321,700 supported by 0.7 total workyears in this program activity. Of this total $122,800 was from the Salaries and Expenses appropriation, and $198,900 was from the Research and Development appropriation. Field work was completed on three studies of human exposure to Volatile Organic Compounds (VOC's) in Los Angeles, Baltimore and New Jersey.

Final work was also completed on the first study of human exposure to a broad spectrum of pesticides used in the household. In 1989, the majority of this program is described in the Air Research media.

REDUCING UNCERTAINTIES IN RISK ASSESSMENT (RURA)

1991 Program Request

No resources are requested in 1991 for activity in this program element since this activity is being reorganized into the following two new program elements within this Multimedia research program as follows:

1. Reducing Uncertainties in Health Risk Assessments (RIHRA) program element is described in the new "Core Research - Health Risk" program element and

2. Reducing Uncertainties in Ecological Risk Assessments (RUERA) program element is described in the new "Core Research - Ecological Risk" program element.

1990 Program

The Agency is allocating a total of $10,010,600 supported by 4.0 total workyears for this program, of which $270,400 is from the Salaries and Expenses appropriation and $9,740,200 is from the Research and Development appropriation.

Research to Improve Health Risk Assessments (RIHRA) continues in the areas of assessing uncertainty, exposure assessment, physiologically based pharmacokinetic (PB-PK) modeling, and biologically based dose response modeling.

Research to Reduce Uncertainties in Ecological Risk Assessments (RUERA) will address uncertainties associated with the structure and function of ecosystems, the identification, measurement, and interpretation of endpoints of ecological change, and the assessment of hazards associated with ecosystems stress. Initial emphasis will be placed on the characterization of the condition of near-coastal estuarine systems in the mid-Atlantic region and their exposure to stress. A demonstration project will identify indicators of estuarine ecosystem condition (in cooperation with the status and trends program) and then quantify them on a regional basis. These data will be used to assess the status of ecosystem condition in these systems and will be used as the basis for more detailed research in 1991.

1989 Accomplishments

In 1989, the Agency obligated a total of $10,237,800 supported by 2.9 total workyears for this program, of which $294,200 was from the Salaries and Expenses appropriation and $9,943,600 was from the Research and Development appropriation.

Research projects were initiated in all topics of the RIHRA Program. A work shop was held to identify the framework for research on the topic of uncertainty analysis and a number of areas of research focus were identified. Research was initiated in the topics of exposure assessment, physiologically based phamacokinetic parameters in risk assessment, and biologically-based dose response models.

In reducing uncertainties in ecological risk assessments, preliminary work was performed on ecosystem classification, monitoring network design, database management, and environmental statistics culminating in a research and implementation plan for the ecological trends program.

THE NEXT THREE (3) PROGRAM ELEMENTS HAVE BEEN REORGANIZED IN 1991 TO BETTER MANAGE GENERAL SCIENTIFIC MULTIMEDIA RESEARCH ACTIVITIES WITH THE NEW "CORE" RESEARCH PROGRAM.

MULTIMEDIA ACTIVITIES

1991 Program Request

The Agency requests a total of $3,105,900 supported by 4.0 total workyears for this new program of which $410,900 will be for the Salaries and Expenses appropriation and $2,695,000 will be for the Research and Development appropriation.

Visiting Scientists Program. This activity sponsors two unique programs to bring research scientist outside of EPA into the Agency to collaborate on environmental research projects and exchange their scientific understandings. Under the Visiting Scientists and Engineers Program, applicants will be selected to conduct research at EPA facilities in collaboration with Agency researchers on advanced environmental research topics identified by EPA laboratories. Under the Environmental Science and Engineering Fellows Program, in cooperation with the American Association for the Advancement of Science, 10 research fellows will be placed in EPA organizations to conduct policy studies on various high-priority issues identified by the Agency.

Small Business Innovation Research Program. This program will solicit, review and select proposals for Phase I and II awards. About 25 Phase I feasibility studies will be supported while about 13 Phase II projects will be awarded.

1990 Program

The program activities in 1990 are described in the Exploratory Research program element within this Multimedia research program.

1989 Accomplishments

1989 accomplishments for these program activities are described in the same program elements in 1989 as in 1990.

CORE RESEARCH - GRANTS AND CENTERS

1991 Program Request

The Agency requests a total of $34,277,500 supported by 12.0 total workyears for this new program, of which $1,437,600 will be for the Salaries and

Expenses appropriation and $32,839,900 will be for the Research and Development appropriation:

Exploratory Research Grants Program. Under a general solicitation, support will be granted to about 150 new projects while 130 ongoing projects will be granted continuation support. This program will emphasize: continued improvement in quality of research; coordination with the Agency's research planning process; dissemination of results from completed grants; and coordination with other Federal agencies. Seminars and workshops featuring the completed work of grantees will continue in Agency laboratories and at other locations around the country.

Academic Research Centers Program. The Agency's Academic Research Centers Program supports environmental studies of high priority to the Agency such as groundwater and hazardous waste control technologies. Management attention in the centers will focus on new trends and discoveries coming from ongoing research studies. An annual report will summarize the activities and accomplishments of these centers. Symposia, workshops and publications in journals, ensure that information learned from center studies is shared. New academic research centers will begin operation in 1991 since 1990 will be the final year of operation for seven centers and 1991 will be the final year for the eighth center.

1990 Program

The program activities in 1990 are described in the "Exploratory Research" program element within this Multimedia research program.

1989 Accomplishments

1989 accomplishments for these program activities are described in the same program elements in 1989 as in 1990.

EXPLORATORY RESEARCH

1991 Program Request

No resources are requested in 1991 for activity in this program element since this activity is being reorganized into the following two new program elements within this Multimedia research program as follows:

1. Grants and Centers program element is described in the new "Core Research -Grants & Centers" program element,
2. Task Force on Environmental Cancer and Heart and Lung Disease program element is described in the new "Health Effects" program element, and
3. Visiting Scientist program element and Small Business Innovative Research program element is described in the new "Interdisciplinary Activities" program element.

1990 Program

The Agency is allocating a total of $25,153,700 supported by 15.0 total workyears for this program. Of this total, $1,155,100 is from the Salaries and

Expenses appropriation and $23,998,600 is from the Research and Development appropriation.

The Task Force on Environmental Cancer and Heart and Lung Disease is planning to convene a workshop on environmental education and risk communication and is developing a revised inventory of environmental exposure databases. This activity is identified in the "Health Effects" program element in 1991.

The Visiting Scientists and Engineers Program expects to approve the support of five to ten prominent outside scientists or engineers at EPA laboratories to collaborate with Agency researchers on priority research projects. The Environmental Science and Engineering Fellows Program is supporting ten professionals at EPA organizations to investigate environmental policy issues.

The Small Business Innovation Research Program has allocated 1.25 % of the extramural research budget to support projects for the development of equipment and instrumentation for pollution control and environmental monitoring. Thirty-six such projects are supported.

The Exploratory Research Grants Program is supporting about 110 new projects and 42 ongoing projects. Seminars and workshops featuring the completed work of grantees continue in Agency laboratories and at other locations around the country.

The Academic Research Centers Program supports environmental studies of high priority to the Agency such as groundwater and hazardous waste control technologies. In 1990, the eight (8) EPA academic research centers and research focus are as follows:

1. Louisiana State University - Hazardous Waste Research,
2. Illinois Institute of Technology - Industrial Waste Elimination Research,
3. University of Illinois (Urbana) - Advanced Environmental Control Technology Research,
4. Rice, University of Oklahoma, and Oklahoma State University - Groundwater Research.
5. University of Rhode Island - Marine Sciences Research,
6. University of California (Los Angeles) - Intermedia Transport Research,
7. Cornell University - Ecosystems Research, and
8. University of Pittsburgh - Environmental Epidemiology,

Since 1990 is the final year of operation for seven centers, applications will be solicited and a competition will be held to select seven new academic research centers to begin in 1991.

1989 Accomplishments

In 1989, the Agency obligated a total of $17,139,300 supported by 14.0 total workyears for this program, of which $946,000 was from the Salaries and Expenses appropriation and $16,193,300 was from the Research and Development appropriation.

The Task Force on Environmental Cancer and Heart and Lung Disease supported a workshop on environmental and occupational asthma, completed the proceedings on a workshop on the roles of government and non-government organizations in risk communications, and continued work on the proceedings of workshops on evaluation of risk communications and the effects of pesticides exposure.

The Visiting Scientists Program approved the appointment of four (4) visitors under the Visiting Scientists and Engineers Program. Under the Environmental Science and Engineering Fellows Program, ten (10) visitors were assigned to EPA organizations to conduct policy studies.

A total of 39 awards were made to small high-technology firms under the Small Business Innovation Research Program: 27 Phase I feasibility studies and 12 Phase II development projects.

The Exploratory Research Grants Program awarded 50 new grants and provided continuation support for 12 ongoing projects. In addition, 14 projects were awarded under a Request for Applications (RFA) solicitation.

The Academic Research Centers Program provided continuation support for projects conducted at the eight university-based research centers.

THE NEXT TWO (2) PROGRAM ELEMENTS HAVE BEEN REORGANIZED IN 1991 TO BETTER MANAGE MULTIMEDIA ECOLOGICAL RESEARCH ACTIVITIES WITH THE NEW "CORE" RESEARCH PROGRAM.

CORE RESEARCH-ECOLOGICAL RISK

1991 Program Request

The Agency requests a total of $26,686,500 for this program supported by 14.0 total work years of which $1,572,300 is for the Salaries and Expenses appropriation and $25,114,200 will be for the Research and Development appropriation.

Core Research - Ecological Risk

The "core" research program in ecological risk will progress from program planning and development into the first phase of implementation. This will involve demonstration and pilot research projects in various ecosystems. Research activities on developing ecological indicators and landscape characterization will continue. The experience gained during the NOAA/EPA near-coastal demonstration monitoring project in the mid-Atlantic region will be used to implement monitoring in the Gulf of Mexico. A forest monitoring project, conducted by EPA and the U.S. Forest Service in the northeastern U.S., will move into a second phase in the southeastern U.S. Demonstration projects will be also be initiated in inland surface waters and agricultural systems. Emphasis on identifying and developing biological indicators of ecological condition will be marine, estuarine and freshwater systems.

The Ecological Monitoring and Assessment Program (EMAP) will further develop landscape characterizations and data to develop sampling frames for field monitoring projects. Results of several simulated assessments will be available and will provide the basis for developing long-term assessment protocols.

Reducing Uncertainties in Risk Assessment (RURA) - Ecological

Research in 1991 will emphasize selecting representative near-coastal estuaries for determining the causes of adverse conditions observed in the 1990 near-coastal demonstration monitoring project within the mid-Atlantic region. Research will focus on the diagnosis of observed conditions and developing tools and protocols for quantifying and predicting pollutant exposure and ecosystem responses. The goal of this research will be to develop a systems approach to ecological risk assessments by modeling responses from representative estuaries in the mid-Atlantic region from alternative risk management options.

1990 Program

The program activities in 1990 are described in the "Ecological Status and Trends" program element and the "Reducing the Uncertainties in Risk Assessment" program element within this Multimedia research program.

1989 Accomplishments

1989 accomplishments for these program activities are described in the same program elements in 1989 as in 1990.

ECOLOGICAL STATUS AND TRENDS

1991 Program Request

No resources are requested in 1991 for activity in this program element since this activity is being reorganized into the new "Core Research - Ecological Risk" program element within this Multimedia research program.

1990 Program

The Agency has allocated a total of $17,790,400 for this program supported by 12.0 total work years. Of this total, $1,023,500 is for the Salaries and Expenses appropriation and $16,766,900 is for the Research and Development appropriation.

1990 is the first year for this program designed to estimate the current status, changes, and trends in the condition of ecosystems to better determine the relationships between human- induced stresses and adverse changes in ecosystems. The initial emphasis is on developing and testing ecosystem monitoring indicators of surface waters, wetlands, forests, deserts, rangelands, grasslands and agricultural lands. From these indicators, national scale monitoring programs is planned to be designed. Assessments to evaluate these designs will later be preformed using existing and simulated data. Research on characterizing land use patterns and landscape ecology on a regional scale is being initiated. The near coastal demonstration project, started under the RURA-

Eco Program in 1989, is being expanded to the Gulf of Mexico. A joint EPA/USFS monitoring and demonstration project in forest ecosystems is also being initiated. Finally, EPA is also investigating, based upon the 1990 Appropriations Conference Report, the necessity of establishing a national environmental sciences institute, through an open and competitive process, which could provide a coordinated focus for basic long-term ecological research.

1989 Accomplishments

This program did not exist in 1989.

CORE RESEARCH-RISK REDUCTION

1991 Program Request

The Agency requests a total of $ 4,625,000 for this program supported by 5.0 total work years of which $425,000 is from the Salaries and Expenses appropriation and $4,200,000 is from the Research and Development appropriation. This represents increases of $214,900 and $1,277,900 respectively with an increase of 5.0 workyears. The increase in the Salaries and Expenses appropriation reflects support for conducting research on pollution prevention. The increase in the Research and Development appropriation reflects more support for the pollution prevention research.

Pollution Prevention. During 1991, emphasis will be on product research, technology transfer and technical assistance. In the area of product research, standard methods for evaluating pollution impacts from products will be established. Several cost-effective and environmentally preferable products will be demonstrated. A standardized pollution prevention opportunity assessment procedure will be developed and assessments conducted with selected industries. The program will also involve research on identifying opportunities for incorporating pollution prevention practices into the nation's industrial infrastructure. Emerging technologies and patterns of the use and disposal of resources will be identified. Potential changes to reduce releases of contaminants into the environment will be investigated. These pollution prevention research activities complement those described in the Hazardous Waste Research media request for 1991.

Information and Communications. The selection and implementation of viable, cost-effective risk reduction approaches are influenced by a variety of legal, scientific, economic and political factors. The traditional command and control approach is limited to environmental problems which can be solved with the current regulatory program. However, many of the recent environmental problems (radon, global climate change, non-point sources, etc.) are not amenable to the usual command and control approach. Instead, a variety of alternative approaches for pollution abatement, which we call information and communication, must be developed. Accordingly, research will be conducted in the following areas: risk communication; incentives and disincentives; technical information dissemination; commercialization and utilization; and education and training. EPA's research will be closely linked to its research products and integrated with Environmental Implementation Research Program being coordinated by EPA's Office of Policy, Planning and Evaluation.

1990 Program

The Agency has allocated a total of $3,132,200 for this program supported by no workyears of which $210,100 is from the Salaries and Expenses appropriation and $2,922,100 is from the Research and Development appropriation.

During 1990, this program is building on the on-going effort in waste minimization being conducted as part of the Hazardous Waste Research program. Specifically, the on-going activities in innovative technology evaluations are underway to make them applicable across all media programs. Several evaluations are being undertaken to prevent pollution, especially those emitting discharges to the air. Industry-specific pollution prevention assessment manuals are being revised to make them applicable to identify pollution prevention opportunities in all media.

1989 Accomplishments

This program did not exist in 1989.

CAPITAL INVESTMENTS

1991 Program Request

The Agency requests a total of $8,450,000 in the Research and Development appropriation supported by no workyears for scientific research equipment. This represents an increase of $2,553,900 in the Research and Development appropriation. This increase will allow EPA: (a) partially replace old research equipment more than seven years old and (b) procure new scientific research equipment to upgrade the current inventory at EPA research laboratories to more state-of-the-art.

1990 Program

The Agency has allocated $5,896,100 of the Research and Development appropriation with no workyears for replacement of aging and procurement of new scientific research equipment at EPA research laboratories.

1989 Accomplishments

The Agency was authorized $2,000,000 from within the Research and Development appropriation for replacement of scientific research equipment. This authority was used, but obligations were made in other media research programs, therefore, no obligations are identified in this program element in 1989.

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MULTIMEDIA
Environmental Review and Coordination

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Environmental Review and Coordination					
Salaries & Expenses	$4,616.9	$5,333.7	$5,490.5	$5,410.3	-$80.2
Abatement Control and Compliance	$4,973.2	$6,920.9	$6,761.4	$9,900.0	$3,138.6
TOTAL	$9,590.1	$12,254.6	$12,251.9	$15,310.3	$3,058.4
TOTAL:					
Salaries & Expenses	$4,616.9	$5,333.7	$5,490.5	$5,410.3	-$80.2
Abatement Control and Compliance	$4,973.2	$6,920.9	$6,761.4	$9,900.0	$3,138.6
Environmental Review and Coordination TOTAL	$9,590.1	$12,254.6	$12,251.9	$15,310.3	$3,058.4
PERMANENT WORKYEARS					
Environmental Review and Coordination	99.4	124.9	108.0	114.9	6.9
TOTAL PERMANENT WORKYEARS	99.4	124.9	108.0	114.9	6.9
TOTAL WORKYEARS					
Environmental Review and Coordination	106.2	124.9	114.8	114.9	.1
TOTAL WORKYEARS	106.2	124.9	114.8	114.9	.1

ENVIRONMENTAL REVIEW AND COORDINATION

Budget Request

The Agency requests a total of $15,310,300 supported by 114.9 total workyears for 1991, an increase of $3,058,400 and an increase of 0.1 total workyears from 1990. Of the request, $5,410,300 will be for the Salaries and Expenses appropriation and $9,900,000 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $80,200 in the Salaries and Expenses appropriation, and an increase of $3,138,600 in the Abatement, Control and Compliance appropriation.

1991 Program Request

The Agency requests a total of $15,310,300 supported by 114.9 total workyears, of which 5,410,300 will be for the Salaries and Expenses appropriation and $9,900,000 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $80,200 for Salaries and Expenses, an increase of $3,138,600 for Abatement, Control and Compliance, and an increase of 0.1 total workyears.

The decrease in Salaries and Expenses reflects lower costs in 1991 compared to one-time costs experienced in 1990. The workyear increase will support the Federal Facility Compliance component of this program by improving identification, tracking and compliance monitoring of the Federal Facilities universe, increased coordination with States through State/EPA enforcement agreements, the development of model compliance agreements for RCRA/CERCLA sites and an improved and more systematic approach to technical/program assistance to Federal agencies at both Headquarters and Regional levels. The increase in Abatement, Control and Compliance will provide additional technical support and consultation to Indian Tribal governments, with an emphasis on developing and implementing technical and institutional solutions to environmental problems on Tribal lands.

In 1991, Abatement, Control and Compliance (AC&C) resources will fund a select number of pilot projects for the development and demonstration of self-sufficient Tribal environmental programs. EPA is undertaking a major initiative to provide technical assistance and guidance to Federal agencies establishing environmental auditing programs to ensure compliance. AC&C resources will also support Agency-wide multimedia environmental projects to enable rapid Regional response to significant or unique problems.

1990 Program

In 1990, the Agency is allocating a total of $12,251,900 and 114.8 total workyears, of which $5,490,500 is from the Salaries and Expenses appropriation and $6,761,400 is from the Abatement, Control and Compliance appropriation.

In 1990, the Environmental Review and Coordination (ER&C) program will begin a more aggressive effort to identify Federal facilities out of compliance with Federal environmental requirements and bring them into compliance. EPA will review and provide environmental design information on approximately 300 draft Environmental Impact Statements (EISs) for major projects and will conduct approximately 1,500 environmental assessment reviews involving hydroelectric dams, modifications and flood control/water resource projects. The ER&C program will follow-up over 100 of these projects to resolve environmental problems. This program will identify, as early as possible, the environmental impacts of these proposed major Federal actions, and ensure correction of any adverse environmental impacts. EPA will provide continuing environmental assessment support for the municipal wastewater treatment construction grants program, the National Pollutant Discharge Elimination System (NPDES) new source permits program, and the research and development program of the Office of Research and Development. In addition, this program provides for the review, approval and oversight of State environmental review programs required as a prerequisite for participation in the State Revolving Fund (SRF) program. Environmental assessment support includes technical assistance to States in establishing National Environmental Policy Act (NEPA) oriented programs for the SRF and to support successful discharge of their delegated responsibilities under the Construction Grants program. The program will also assist EPA regional media program offices in their efforts to comply with other environmental laws affecting these programs.

Technical assistance and funding will continue to be provided to selected Indian Tribes. In 1990, the focus of the Indian Program will be: improved communication with Indian tribes, identification of priority environmental problems on reservation lands, and the development of Tribal programs to address these problems in lieu of direct Federal implementation.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,590,100 supported by 106.2 total workyears, of which $4,616,900 was from the Salaries and Expenses appropriation and $4,973,200 was from the Abatement, Control and Compliance appropriation.

In 1989, the NEPA program provided assistance to delegated state construction grants programs, ensured that EPA issued NPDES new source permits were in compliance with NEPA, assisted EPA's Office of Research and Development and laboratories in meeting NEPA requirements for research and development projects and assisted EPA Regional program offices in their efforts to comply with other environmental laws and to carry out reviews equivalent to NEPA. The Agency continued to assist Federal agencies in identifying facilities needing pollution controls, determined the most cost effective control, and resolved disputes at facilities which were out of compliance through use of the new EPA Federal Facilities Compliance Strategy. Emphasis was placed on hazardous waste problems on Federal installations. In addition, guidance was issued for Federal agencies to assist them in designing and implementing environmental auditing programs. The Agency also continued to work on the review of environmental impacts of proposed projects, regulations, and other major Federal actions as required by both NEPA and Section 309. The major objective to minimize the adverse environmental impact of Federal proposals was accomplished by: (1) effective liaison with other Federal agencies, (2) early identification of significant environmental issues, and (3) timely review of major actions. The Agency strengthened its Indian programs and provided technical assistance on priority environmental problems on Indian lands.

MULTIMEDIA
Office Of Cooperative Environmental Management

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Office Of Cooperative Environmental Management						
Salaries & Expenses		$919.6	$728.6	$587.3	$740.1	$152.8
Abatement Control and Compliance		$1,552.0	$1,680.5	$1,657.3	$2,058.2	$400.9
	TOTAL	$2,471.6	$2,409.1	$2,244.6	$2,798.3	$553.7
TOTAL:						
Salaries & Expenses		$919.6	$728.6	$587.3	$740.1	$152.8
Abatement Control and Compliance		$1,552.0	$1,680.5	$1,657.3	$2,058.2	$400.9
Office Of Cooperative Environmental Mangement	TOTAL	$2,471.6	$2,409.1	$2,244.6	$2,798.3	$553.7
PERMANENT WORKYEARS						
Office Of Cooperative Environmental Management		11.8	16.0	16.0	16.0	0.0
TOTAL PERMANENT WORKYEARS		11.8	16.0	16.0	16.0	0.0
TOTAL WORKYEARS						
Office Of Cooperative Environmental Management		12.3	16.0	16.0	16.0	0.0
TOTAL WORKYEARS		12.3	16.0	16.0	16.0	0.0

MULTIMEDIA

Office of Cooperative Environmental Management

Budget Request

The Agency requests a total of $2,798,300 supported by 16.0 total workyears in 1991. This represents an increase of $553,800 and no change in total workyears from 1990. Of this request, $740,100 will be for the Salaries and Expenses appropriation and $2,058,200 will be for Abatement, Control, and Compliance appropriation. This represents an increase of $152,800 in the Salaries and Expenses and an increase of $400,900 in the Abatement, Control, and Compliance appropriation.

OFFICE OF COOPERATIVE ENVIRONMENTAL MANAGEMENT

1991 Program Request

The Agency requests a total of $2,798,300 supported by 16.0 total workyears for this program, of which $740,100 will be for the Salaries and Expenses appropriation and $2,058,200 will be for the Abatement, Control, and Compliance appropriation. This represents an increase of $152,800 in the Salaries and Expenses appropriation, an increase of $400,900 in the Abatement, Control, and Compliance appropriation, and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase in the Abatement, Control, and Compliance appropriation will provide funds to support Senior Environmental Employees (SEE) personnel. This program will continue to develop a national program that identifies, documents, and disseminates selective exemplary environmental practices; establishes a national network of environmental technical experts; expands EPA's academic and vocational infrastructure through environmental management institutes; assures continued growth in the management of EPA's National Network for Environmental Management Studies (NNEMS); staffs the Administrator's National Advisory Council on Environmental Technology Transfer (NACETT) and its four committees, and oversees the response to those of its recommendations accepted by the Administrator; and identifies and promotes the development and use of needed new and innovative environmental technologies through appropriate cooperative efforts with organizations and institutions outside EPA and by identifying and initiating efforts to remedy administrative and other barriers to the development and use of needed new environmental technology. In addition, this program will seek and assess new and existing environmental technologies outside of the Agency for possible use by the Agency or by others and will do so with the assistance of experts in academia, and among technological leaders in business and industry, and in other Federal, State, and local agencies.

1990 Program

In 1990, the Agency is allocating a total of $2,244,600 supported by 16.0 total workyears for this program of which $587,300 is for the Salaries and Expenses appropriation and $1,657,300 is for the Abatement, Control and Compliance appropriation. The program is developing a national program to identify, document, and disseminate selected environmental "best practices" that constitute model approaches worthy of replication; establishing a national network of environmental experts and communication focal points at the Federal and State levels of government; expanding EPA's academic and vocational infrastructure ties through the development of regionally based cooperative environmental management institutes; assuring continued growth in the management of EPA's National Network for Environmental Management Studies (NNEMS); and creating and staffing the Administrator's National Advisory Council for Environmental Technology Transfer (NACETT) to address issue areas of national concern. In cooperation with Program and Regional Offices, and state and local agencies, this program will identify and promote innovative environmental management and implementation strategies through ongoing program development activities and demonstrations. In cooperation with the Office of Research and Development (ORD), it will promote and support activities required by the Federal Technology Transfer Act of 1986 (FTTA) and President's Executive Order 12591 to accelerate the development and commercialization of needed new (environmental) technology. Finally, this program will manage the Administrator's National Small Community Regulatory Outreach program.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,471,600 supported by 12.3 total workyears, of which $919,600 was from the Salaries and Expenses appropriation and $1,552,000 was from the Abatement, Control, and Compliance appropriation. During 1989, the following accomplishments were achieved: implemented within the Agency the Federal Technology Transfer Act of 1986 and Executive Order 12591; supported a wide array of new program-specific, Region-specific and Agency-wide initiatives to improve the implementation of EPA programs through improved information sharing within and outside the Agency; promoted and supported the development of university-led consortia to assess the efficacy of newly developed environmental technologies and promoted the commercialization of those technologies found to be needed and efficacious; developed and initiated a program to disseminate case studies of environmental best practices; and established a network of technology transfer focal points in each Headquarters and Regional Office and in each state.

MULTIMEDIA
Multimedia Training Grants

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Multimedia Training Grants						
Abatement Control and Compliance		$768.1	$492.3	$486.0		-$486.0
	TOTAL	$768.1	$492.3	$486.0		-$486.0
TOTAL:						
Abatement Control and Compliance		$768.1	$492.3	$486.0		-$486.0
Interdisciplinary Training Grants	TOTAL	$768.1	$492.3	$486.0		-$486.0

MULTIMEDIA

Multimedia Training Grants

Budget Request

The Agency requests no resources for this activity in 1991. This represents a decrease of $486,000 in the Abatement, Control and Compliance appropriation from 1990.

MULTIMEDIA TRAINING GRANTS

1991 Program Request

The Agency requests no resources for this activity in 1991.

1990 Program

In 1990, the Agency is allocation $486,000 from the Abatement, Control and Compliance appropriation for this program to develop course materials for state/local technical staff training through community colleges.

1989 Accomplishments

In 1989, the Agency obligated $768,100 for this program which provided academic and professional training to State and local environmental personnel in the areas of pollution control and environmental engineering. The program also provided economic support, through fellowships and training grants, to minority students allowing them to receive academic training in the environmental field. Support was provided to community colleges to link secondary schools and post secondary institutions into a more rounded environmental career education program.

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MULTIMEDIA
Enforcement Policy & Technical Support

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Enforcement Policy & Operations Dumping Fund						
Salaries & Expenses		$15,320.4	$16,724.0	$16,948.0	$22,693.4	$5,745.4
Abatement Control and Compliance		$319.4	$1,501.6	$1,481.0	$2,117.0	$636.0
	TOTAL	$15,639.8	$18,225.6	$18,429.0	$24,810.4	$6,381.4
Criminal Investigation Program						
Salaries & Expenses		$2,591.9	$3,359.4	$3,264.8	$4,857.7	$1,592.9
	TOTAL	$2,591.9	$3,359.4	$3,264.8	$4,857.7	$1,592.9
Technical Support Office of Enforcement And Compliance Monitoring						
Salaries & Expenses		$3,189.3	$3,407.9	$3,319.8	$4,687.1	$1,367.3
Abatement Control and Compliance		$2,085.5	$1,554.0	$1,532.7	$2,566.5	$1,033.8
	TOTAL	$5,274.8	$4,961.9	$4,852.5	$7,253.6	$2,401.1
TOTAL:						
Salaries & Expenses		$21,101.6	$23,491.3	$23,532.6	$32,238.2	$8,705.6
Abatement Control and Compliance		$2,404.9	$3,055.6	$3,013.7	$4,683.5	$1,669.8
Enforcement Policy & Technical Support	TOTAL	$23,506.5	$26,546.9	$26,546.3	$36,921.7	$10,375.4
PERMANENT WORKYEARS						
Enforcement Policy & Operations Dumping Fund		275.7	335.8	310.2	395.6	85.4
Criminal Investigation Program		37.9	57.4	56.9	64.7	7.8
Technical Support Office of Enforcement And Compliance Monitoring		55.5	63.3	62.5	69.7	7.2
TOTAL PERMANENT WORKYEARS		369.1	456.5	429.6	530.0	100.4

MULTIMEDIA
Enforcement Policy & Technical Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
TOTAL WORKYEARS					
Enforcement Policy & Operations Dumping Fund	298.3	335.8	324.6	395.6	71.0
Criminal Investigation Program	38.1	57.4	56.9	64.7	7.8
Technical Support Office of Enforcement And Compliance Monitoring	58.6	63.3	62.5	69.7	7.2
TOTAL WORKYEARS	395.0	456.5	444.0	530.0	86.0

MULTI-MEDIA PROGRAMS

Enforcement Policy & Technical Support

	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE + DECREASE - 1990
Enforcement Actions				
Administrative Orders				
EPA	3,016	3,520	4,132	+612
States (Third Quarter Data)	3,033	*	*	*
New Judicial Referrals				
EPA Civil	203	214	273	+59
EPA Criminal	62	71	88	+17
State Civil (Third Quarter Data)	392	*	*	*
Civil Judicial Cases, Ongoing				
Cases Start of Year	620	630	710	+81
Cases Concluded	193	134	177	+43
Active Consent Decrees	588	*	*	*
Criminal Investigations				
New	118	130	149	+19
Start of Year	150	184	*	*
Defendants Charged	95	*	*	*
Contractor Listing				
Delisting and Discretionary Listings	31	63	73	+10
Permit Support				
RCRA	272	126	90	+36
NDPES	419	371	371	0
UIC	625	515	515	0
Penalties Assessed				
Administrative & Civil	$34,156,000	*	*	*
Criminal	$8,634,900	*	*	*

* Future year projections are not made for this data element.

ENFORCEMENT

Enforcement Policy and Technical Support

Budget Request

The Agency requests a total of $36,921,700 supported by 532.0 total workyears for 1991, an increase of $10,375,[illegible]00 and 88.0 total workyears from 1990. Of the request, $32,238,200 will be for the Salaries and Expenses appropriation and $4,683,500 will be for the Abatement, Control and Compliance appropriation. This represents increases of $8,705,600 in the Salaries and Expenses appropriation and $1,669,800 in the Abatement, Control and Compliance appropriation. This represents an increase of 82.0 total workyears from the Salaries and Expenses appropriation, an increase of 4.0 total workyears from the Reregistration and Expected Processing Revolving Fund and 2.0 total workyears from the Ocean Dumping Fund.

ENFORCEMENT POLICY AND OPERATIONS

1991 Program Request

The Agency requests $24,810,400 supported by 397.6 total workyears for this program, of which $22,693,400 will be for the Salaries and Expenses appropriation and $2,117,000 will be for the Abatement, Control and Compliance appropriation. Total workyears will include 390.6 from the Salaries and Expenses appropriation, 5.0 from the Reregistration and Expedited Processing Revolving Fund, and 2.0 from the Ocean Dumping Fund. This represents an increase of: $5,745,400 for the Salaries and Expenses appropriation; $636,000 for the Abatement, Control and Compliance appropriation, 67.0 in Salaries and Expenses workyears, 4.0 in workyears from the Reregistration and Expedited Processing Revolving Fund, and 2.0 in workyears from the Ocean Dumping Revolving Fund. The increase in Salaries and Expenses appropriation reflects costs associated with the additional workyears requested and increased personnel and support costs. The increase in the Abatement, Control and Compliance appropriation reflects several initiatives related to improving enforcement actions, enhancing capacity building in the Regions and States, and initiatives for pollution prevention projects. The workyear increases are related to higher enforcement actions projected, timely follow through on enforcement actions begun in prior years, legal support to the enforcement provisions of the Administration's Clean Air Act (CAA) legislation, and improved RCRA enforcement.

The goal of this program is to respond to instances of non-compliance with environmental statutes with consistent, timely, and effective enforcement actions. Resources requested by Headquarters and the Regions reflect anticipated workload for projected administrative enforcement actions, new and ongoing civil and criminal judicial litigation and a number of enforcement initiatives related to improving the effectiveness of national environmental enforcement efforts. In 1991, 7.0 additional workyears at Headquarters will implement or expand approaches to improve the effectiveness of the legal enforcement program. These workyears will ensure the building of Regional and State capacity within an integrated framework for consistent and equitable enforcement. Development of training materials and management of training to cost-effectively reach a larger audience will expand upon 1990 efforts. An increase of 1.5 workyears will focus on training in RCRA-specific case preparation techniques. Program efforts will emphasize enhancing Headquarter's role in working with Regions and states to better target and prosecute violators posing the greatest environmental risk. Two workyears will coordinate this effort.

A total of 3.5 additional workyears will ensure the enforceability of Agency regulations and enforcement guidance development, as well as case support for wetlands protection, drinking water and hazardous waste. Areas of emphasis for 1991 will include enforcement of sludge permits; failure to seek storm water permits; revisions to the pretreatment enforcement strategy, requirements for Safe Drinking Water Act (SDWA) Class V wells regarding high risk injection practices; enforcement of PCB disposal deadlines; the water toxics enforcement strategy; implementation of the National Wetlands Policy Forum recommendations; Emergency Planning and Community Right-to-Know Act (EPCRA) data quality requirements; and hazardous waste permit compliance. An additional 2.5 workyears is requested to develop policy and regulations to implement the Administration's Clean Air Act Amendments.

An increase in Abatement, Control and Compliance of $636,000 in 1991 will: 1) enhance Resource Conservation and Recovery Act (RCRA) enforcement training for emerging areas, land ban and corrective actions; 2) implement new enforcement provisions under Federal Insecticide, Fungicide and Rodenticide Act (FIFRA 88) will; 3) foster linkage of compliance reporting systems via a data integration effort; 4` establish a more efficient analytic capability and management focus for targeting inspection and enforcement resources; and 5) support pollution prevention initiatives. Support of $138,000 is related to new enforcement requirements under the Clean Air Act Amendments. These include targeting and data integration support.

The Regions will be responsible for initiating new enforcement actions based upon statutory, regulatory, and programmatic directives. Increased levels of administrative orders, civil judicial referrals and litigation will require substantially increased legal support. Regional legal resources will also respond to growth in the numbers of criminal investigations, referrals, and indictments expected to occur as a result of the expansion in the criminal investigation program.

Regional legal resources will also press vigorously for successful closure of cases active on the Agency's growing judicial docket, as well as careful oversight and follow-through on active consent decrees with conditions still not met. These needs coupled with a growing imperative to follow through on cases filed in prior years forms the basis of a request for 50 added workyears for Regional legal support in 1991.

An additional 8.5 workyears are requested based upon the Administration's proposed Clean Air Act to begin implementing strengthened enforcement provisions in Title VI of the Act. Establishment of a permit program, expanded administrative penalty provisions, new compliance certification requirements, and the statutory presumption of continuous violation will significantly alter the CAA enforcement program and will require added Regional legal workyears.

Pollution prevention initiatives for 1991 will focus on two areas. First, the use of environmental auditing among local governments will be expanded. EPA will assist local governments in establishing audit programs, document successful techniques and organizational approaches, conduct multimedia information exchange on a cross-governmental basis, and analyze unique compliance problems of municipalities in this area. Second, EPA will build upon enforcement settlements by promoting the use of pollution prevention requirements as part of a violator's ameliorative efforts. A policy to include pollution prevention requirements in enforcement settlements will help reduce or eliminate root causes of noncompliance by committing the violator (via enforceable agreements) to undertake appropriate source reduction or recycling activities. This policy will be implemented in 1991 after a pilot testing of the draft policy in 1990. The pilot testing will analyze the effectiveness of this approach as an enforcement tool.

In 1991, Headquarters and Regional legal resources will have primary responsibility for implementation of enforcement activities resulting from reregistration requirements of FIFRA 88 legislation. Not only will the volume of pesticides administrative actions increase, but the new regulations will increase the scope of enforcement actions to areas not previously regulated. These include regulations governing container design and handling procedures, as well as transportation, storage and disposal of pesticides.

In 1991, Regional Counsel staff will also provide legal support to follow-up enforcement actions begun in 1990 related to Ocean Dumping legislation.

1990 Program

In 1990, the Agency is allocating a total of $18,429,000 supported by 323.6 total workyears for this program, of which $16,948,000 is from the Salaries and Expenses appropriation, and $1,481,000 is from the Abatement, Control and Compliance appropriation. Total workyears include 323.6 from the Salaries and Expenses appropriation, and 1.0 workyear from the Reregistration and Expedited Processing Revolving Fund.

The 1990 enforcement program is characterized by a continued aggressive enforcement presence. Legal enforcement support will address critical and emerging areas which include by statute the following:

- Clean Air Act (CAA): Enforcement of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for volatile organic compounds, enforcement against sources of pollution in ozone non-attainment areas, and enforcement of PM_{10} standard and sulfur dioxide continuous emission monitoring requirements.

- The Clean Water Act (CWA) and Safe Drinking Water Act (SDWA): Enforcement of requirements on wetlands protection, protection of near coastal waters, pretreatment requirements for publicly owned treatment works (POTWs), enforcement of coliform requirements and other maximum contaminant levels (including lead) applicable to public water systems, control of high risk injection practices in injection wells affecting groundwater, and implementation of new citizen suit provisions.

- **Ocean Dumping Ban and Shore Protection Act:** Enforcement of revised dumping requirements and phase out plans.

- **RCRA:** Land ban violations, storage and treatment violations, and corrective action violations.

- **Emergency Preparedness and Community Right-to-Know Act (EPCRA):** Enforcement against facilities that fail to report emergency releases or fail to submit an accurate annual Toxics Release Inventory to their community or EPA.

- **TSCA/FIFRA:** PCB disposal, Premanufacture Notices, compliance with the Asbestos Hazard Emergency Response Act (AHERA), farmworker protection requirements regarding pesticide use, pesticide suspension/reregistration/cancellation.

Headquarters legal support is working to enhance enforcement effectiveness. This is being done by: developing review procedures for administrative enforcement appeals; enhancing EPA's enforcement communications strategies; developing new approaches to using administrative enforcement; managing a litigation support fund for use in complex administrative and judicial cases with extraordinary expenses; and integrating Agency compliance data systems. The expansion of the direct referral policy for civil litigation has permitted a resource shift to improve capacity-building and innovation, as well as allowing more consistent and thorough participation in cases and settlements requiring Headquarters involvement.

The contractor listing function is emerging as an extremely effective tool for achieving compliance. In addition, the number of criminal convictions has grown, resulting in an increasing number of contractors who must be listed as ineligible for receipt of government contracts. The listing program has proven especially effective in promoting the cooperation of firms, encouraging them to take positive steps to comply with environmental laws and thereby gain removal from the list via a delisting procedure.

In 1990, Regional legal resources are being devoted to administrative, civil, and criminal enforcement actions in support of program enforcement priorities in all media. Levels of effort include continuing work on enforcement initiatives of prior years, including CWA National Municipal Policy cases, RCRA loss-of-interim status and land ban cases, TSCA (PCB retirement and asbestos) cases, and CAA cases related to the Ozone, Chloroflourocarbon (CFC) Enforcement, and Benzene NESHAP Enforcement strategies. In addition, aggressive enforcement using administrative tools with penalty provisions (including CWA, SDWA, EPCRA) has increased the impact as well as the timeliness of enforcement actions and lessened the benefit to the violator of failure to comply with environmental laws. At the start of 1990, nearly 500 consent decrees were in place and being monitored to ensure compliance with their provisions.

In 1990 Regional Counsel will provide legal enforcement support to enforcement actions taken as a result of violations of enforcement/compliance agreements by cities or counties which have ocean dumping permits.

Enforcement settlements in 1990, both civil and administrative, are continuing the effort begun in 1989 to include pollution prevention provisions.

To the extent that facilities can be encouraged to alter manufacturing or recycling practices to avoid waste creation through provisions of a settlement order or decree, the Agency is attempting to capitalize on those opportunities.

Headquarters legal staff will be directly involved in the writing of regulations for FIFRA's new reregistration requirements, developing response policies, and supporting regional staff in initial enforcement actions.

1989 Accomplishments

In 1989, the Agency obligated a total of $15,639,800 supported by 298.1 workyears for this program, of which $15,320,400 was from the Salaries and Expenses appropriation and $319,400 was from the Abatement, Control and Compliance appropriation. Total workyears included 298.1 from the Salaries and Expenses Appropriation and 0.2 from the Reregistration and Expedited Processing Revolving Fund.

Enforcement and compliance monitoring in 1989 continued the aggressive enforcement program initiated in 1988. The use of a broad spectrum of enforcement tools sent a clear message to the regulated community regarding the Agency's renewed commitment to enforcing compliance. EPA, in partnership with the States, referred to the Department of Justice (DOJ) for prosecution over 210 civil judicial cases addressing violations of environmental laws. In addition, EPA's criminal enforcement program referred 60 criminal cases to DOJ in 1989. Both the number of criminal cases successfully prosecuted and the number of defendants convicted exceeded 1988 levels. The impact of these judicial actions was augmented by the highest level of administrative enforcement actions in the history of the Agency. During 1989, active judicial consent orders which were in place and being monitored to ensure compliance with their provisions grew to nearly 500. Where non-compliance with the terms and conditions of a consent decree was found, the Agency initiated contempt proceedings with the court to compel compliance. EPA initiated 16 such contempt actions in 1989.

Preliminary statistics indicate that civil judicial and administrative penalty assessments for 1989 may exceed the record levels achieved in 1988. Criminal penalties assessed prior to suspension totaled $8,634,900.

1989 saw an increase in legal support activities provided by Headquarters. These activities included involvement in selected judicial actions with precedent potential, development of legal policy guidance and case management for the criminal investigations program, development and implementation of enforcement strategies and initiatives, continued work on contractor listing and desisting actions, improvements to both inspector development and attorney training efforts, and operation of the Strategic Planning and Management System for Agency enforcement. Particular emphasis was placed on development of cross-media consolidated rules for administrative penalty proceedings not subject to the Administrative Procedures Act (APA). Specific accomplishments include the following:

o A Memorandum of Agreement (MOA) with the Army Corps of Engineers was signed in 1989 which set guidelines for enforcement actions taken to protect wetlands.

- Administrative enforcement actions were taken against companies that failed to provide information (or provided inaccurate data) for the Toxics Release Inventory required under the Emergency Preparedness and Community Right-to-Know Act (EPCRA). Cases of First Impression were pursued by Headquarters attorneys to signal the regulated community that EPA intends to follow through forcefully on this legislation intended to provide information to the public on toxic releases in their communities. Two enforcement initiatives under EPCRA Section 313 resulted in the filing of 113 administrative actions in the first year of the program.

- Implementation of an enforceable regulatory framework for the Medical Waste Tracking Act enacted in November 1988 was also completed.

- Under the Resource Conservation and Recovery Act (RCRA) key legal precedents regarding owner/operator liability for regulatory compliance, corrective action requirements, and civil penalties in both judicial and administrative litigation were established.

- Enforcement strategies and regulations for AHERA, including the development of model pleadings and settlement documents.

Regional legal resources were directed to the generation of administrative enforcement actions and civil referrals most likely to return significant violators to compliance, maintaining a credible enforcement presence, resolution of ongoing judicial cases, legal support to the criminal investigation program, and follow through on consent decrees to determine compliance. Legal resources were also targeted to consultation with media counterparts early in the compliance monitoring and enforcement process, resulting in the generation of high numbers of enforcement actions with major compliance payoffs.

- In the Air program, strong enforcement of the Asbestos Demolition and Renovation regulations sent a message to the demolition and renovation contracting industry regarding EPA's commitment to protecting the public from preventable exposure to asbestos. Air attorneys also completed negotiations on a significant consent decree which required the installation of $9 million worth of equipment to control and continuously monitor sulfur dioxide emissions. Court rulings on violations of the asbestos NESHAP regarding company liability provided precedents which strengthened the enforcement climate.

- Effective use was made of administrative penalty provisions under the Clean Water and Safe Drinking Water Acts. Using these relatively new tools enforcement levels increased significantly over prior year levels.

- In the RCRA program, cases involving loss-of-interim-status filed in prior years were actively pursued. In addition, RCRA enforcement cases were initiated addressing new land disposal restrictions and broaden corrective action requirements.

In addition, Headquarters attorneys helped develop the Administration's Clean Air Act Amendments currently before the Congress. The proposed legislation would strengthen many CAA enforcement provisions including penalty authorities for violations and a potential for felony actions against criminal violators.

CRIMINAL INVESTIGATIONS PROGRAM

1991 Program Request

The Agency requests a total of $4,857,700 supported by 64.7 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $1,592,900 and 7.8 total workyears from 1990. The increase will provide additional criminal investigators and support staff to strengthen environmental enforcement as well as the manpower to enforce the criminal provisions of the reauthorized Clean Air Act.

The objective of this program is to act as a forceful deterrent to violations of environmental laws by providing clear evidence to the regulated community that willful statutory violations will be met with harsh sanctions in terms of both fines and jail sentences.

Criminal investigations and enforcement constitute a highly visible force in the Agency's enforcement strategy and occupy an important place on the continuum of legal enforcement alternatives. Program priorities are based upon Agency guidance, the compliance strategy of the Assistant Administrator for Enforcement and Compliance Monitoring, and the individual media program compliance and enforcement strategies.

The Office of Criminal Investigations' (OCI) close cooperation with state environmental crimes units and other Federal law enforcement agencies effectively multiplies the visibility and deterrence of criminal enforcement in the environmental protection arena. The criminal investigations staff performs the following major functions:

- Screens all leads and develops significant leads into cases;
- Refers appropriate leads to other law enforcement agencies, and pursues joint investigations when circumstances warrant;
- Pursues significant investigations and develops referral material for grand jury action;
- Provides technical support and information for Grand Jury decisions and throughout the trial or pleading process.

Increases in 1991 are needed for several reasons:

- The nature of the program has changed over the past year, and it is continuing to change. As enabling legislation is reauthorized, Congress provides more options for criminal prosecution in addition to those which exist for civil prosecution. Misdemeanors have become felonies, potential fines have been increased, and maximum jail sentences have been lengthened.
- The emerging trend toward investigations of larger facilities and major incidents requires special agents from more than one region

to provide adequate manpower. Two recent examples are the Marine Shale and Rocky Flats investigations.

- Deterring polluters contributes to pollution prevention, and the deterrent value of the Criminal Investigations Program is immeasurable. The publicity generated by such cases as Rocky Flats or Aberdeen Proving Ground creates a ripple effect of voluntary compliance. Facility operators are beginning to realize they can go to jail if they pollute illegally. No longer can corporations simply write off fines as a "cost of doing business".

- The Criminal Program produces net revenue for the Federal government. Although the primary objectives of the program are to deter potential polluters and to catch violators, more money is collected from fines each year than is appropriated for the program.

- An effective Criminal Investigations Program requires unique expense costs for undercover operations, purchase of information or evidence, support vehicles, and specialized equipment such as night scopes and monitoring devices to fully realize the return on the investment in the program.

1990 Program

In 1990, the Agency is allocating a total of $3,264,800 supported by 56.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The Agency is emphasizing in 1990:

- rigorous criminal investigations, particularly with respect to potential or documented willful violations of the Resource Conservation and Recovery Act (RCRA), the air toxic strategy, toxics in all media, and municipal and pretreatment compliance;

- improved case management through more efficient use of investigative resources and greater accessibility of criminal investigators to Regions and Assistant U.S. Attorneys (AUSA);

- closer cooperation with other Federal, state, and local officials;

- greater access to appropriate automated databases; and

- improved technical investigation and evidence audit support. Priority is given to investigations, cases, and remedial actions having the highest potential for avoiding environmental harm and protecting public health.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,591,900 supported by 38.1 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

In 1989, emphasis was placed on rigorous criminal investigations of potential or documented willful violations of RCRA, toxics in all media, and Federal municipal and pretreatment compliance. The National Enforcement Investigations Center (NEIC) continued to provide criminal case development in nationally managed or precedent-setting cases, cases with unique technological requirements and complexity, and cases with multi-Regional or multi-state impacts. The program priorities and proposed resource allocations were based upon Agency guidance, the compliance strategy of the Assistant Administrator for Enforcement and Compliance Monitoring, the individual program strategies including strategies for compliance monitoring, and the individual case development priorities of the Regional Counsels.

TECHNICAL SUPPORT

1991 Program Request

The Agency requests a total of $7,253,600 supported by 69.7 total workyears for this program, of which $4,687,100 will be for the Salaries and Expenses appropriation and $2,566,500 will be for the Abatement, Control and Compliance appropriation. This represents increases of $1,367,300 and $1,033,800, respectively, and an increase of 7.2 total workyears from 1990.

The increase for Salaries and Expenses reflects the higher personnel, capital equipment and operating costs associated with supporting a growing civil and criminal enforcement caseload, as well as the Agency's emphasis on strengthening enforcement.

The increase in the Abatement, Control and Compliance appropriation will provide for several air program initiatives, including:

- the development of corporate compliance histories and targeting of potential non-compliers through the collection and analysis of facility compliance and ambient information;
- development of Geographical Information System (GIS) capabilities; and
- analysis of Toxic Release Inventory System (TRIS) data for identification of air toxic emitters.

The workyear increase reflects greater technical support of criminal investigators, workload based on the proposed reauthorization of the Clean Air Act, and the additional demand anticipated from the Agency's enforcement initiative.

In 1991, the National Enforcement Investigations Center (NEIC) will continue to provide high quality technical support to the Agency's enforcement program. Support provided by the NEIC includes data reviews, reconnaissance inspections, field investigations, laboratory analyses, evidence audit support, report preparation, and supplemental technical information development. NEIC employees will also provide expert technical testimony and expertise in negotiating the technical aspects of consent decrees.

The NEIC will continue to help the Agency build state capacity. State, local, and other Federal enforcement agencies will have access to the commercial databases necessary for thorough investigations and audits. The NEIC will also fund grants to four state enforcement associations.

NEIC cases in 1991 will emphasize large and technically complex facilities identified by targeting techniques, where the potential for environmental benefit is the greatest. Cases will encourage environmental auditing, multi-media and corporate-wide compliance, use of waste minimization and pollution prevention concepts, as well as traditional control measures. Over time the facilities investigated have become larger, and have more often been permitted under more than one environmental statute. Obtaining and verifying the evidence necessary to convict polluters under these conditions requires increased sophistication and thoroughness.

The NEIC will also continue to operate a national information service, providing information to the environmental enforcement community on both civil and criminal case matters. This service provides access to the information systems and databases necessary for enforcement case preparation and the development of initiatives commensurate with Agency enforcement policies and practices.

1990 Program

In 1990, the Agency is allocating a total of $4,852,500 supported by 62.5 total workyears for this program, of which $3,319,800 is from the Salaries and Expenses appropriation and $1,532,700 is from the Abatement, Control and Compliance appropriation.

NEIC continues to support Headquarters and Regional offices in developing enforcement cases that may set a precedent, involve violations of the criminal, civil, and administrative provisions of environmental laws, have multi-regional impacts, require the innovative application of engineering and scientific technology to resolve complex pollution issues, or exceed a Region's capabilities and resources. NEIC plans, develops and provides field and laboratory assistance, information, and data analysis for civil and criminal case preparations involving:

- generation, transport and disposal of toxic and hazardous waste regulated by the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA);

- compliance requirements under the Clean Water Act (CWA);

- standards for the control of hazardous emissions and other air pollutant emissions from sources regulated by the Clean Air Act (CAA);

- new regulatory requirements under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA);

- identification of threatened or contaminated groundwater supplies under the Safe Drinking Water Act (SDWA); and

- regulatory requirements of other environmental legislation, statutes and Executive Orders.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,274,800 supported by 58.6 total workyears for this program, of which $3,189,300 was from the Salaries and Expenses appropriations and $2,085,500 was from the Abatement, Control and Compliance appropriation.

In 1989, the NEIC emphasized achieving the best return on the taxpayer's investment. Information integration and enforcement targeting have enabled the NEIC to identify facilities where the potential for environmental results was the greatest. These techniques typically led to large facilities where a multi-media investigation could address compliance with a total environmental approach.

The NEIC has been involved in a number of significant enforcement cases and has pioneered enforcement tools in both the criminal and civil programs. Especially noteworthy accomplishments are:

- multi-media inspections of large facilities;
- NEIC's emerging role as the focal point for laboratory analytical assistance to the criminal program;
- development of information integration and related targeting capability;
- major Federal facilities compliance investigations;
- training of state and local environmental criminal investigators through the Federal Law Enforcement Training Center;
- expansion of state association membership and new state criminal enforcement programs;
- review of proposed regulations to ensure enforceability; and
- implementation of key new provisions and authorities included in reauthorized or amended statutes.

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TOXIC SUBSTANCES

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
APPROPRIATION					
Salaries & Expenses	$46,233.8	$48,192.6	$47,345.2	$51,129.4	$3,784.2
Abatement Control and Compliance	$80,132.1	$93,993.5	$92,748.5	$46,027.7	-$46,720.8
Research & Development	$16,754.1	$16,182.5	$15,769.1	$16,281.9	$512.8
TOTAL, Toxic Substances	$143,120.0	$158,368.6	$155,862.8	$113,439.0	-$42,423.8
PERMANENT WORKYEARS	816.9	906.6	865.4	886.2	20.8
TOTAL WORKYEARS	863.0	906.6	876.1	886.2	10.1
OUTLAYS	$143,200.2	$140,097.6	$139,462.9	$104,527.4	-$34,935.5
AUTHORIZATION LEVELS	Authorization for the Toxic Substances Control Act expired on September 30, 1983. Reauthorization is pending.				

TOXIC SUBSTANCES

OVERVIEW AND STRATEGY

The Toxic Substances media covers programs implemented under four environmental statutes, all of which focus on control of toxic chemical use. The Toxic Substances Control Act (TSCA) provides the authority and responsibility to protect human health and the environment from unreasonable risks arising from the manufacture, distribution, use, or disposal of existing and new chemicals. The Asbestos School Hazard Abatement Act (ASHAA) directs the Environmental Protection Agency (EPA) to assist states and local educational agencies (LEAs) in determining the extent of risks from exposure to asbestos-containing materials. The Asbestos Hazard Emergency Response Act (AHERA) imposes inspection and abatement requirements on all public and private elementary and secondary schools, and requires EPA to examine the issue of asbestos in public and commercial buildings. Finally, section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) requires EPA to establish an inventory of toxic chemical emissions from certain facilities as part of a broader emergency planning and community right-to-know program.

To carry out its mandates, EPA will implement the following major goals in FY 1991: 1) prevent or eliminate unreasonable risk from new or existing chemicals; 2) reduce unnecessary exposure through voluntary reduction of toxic emissions; 3) encourage the development of safer substitutes for high and medium risk chemicals; and 4) maximize program productivity through improved management and through the strengthening of state and local programs. In addition, two important cross-cutting goals are to ensure strong toxic substances enforcement and adequate research and development support.

Prevent or Eliminate Unreasonable Risk

The New Chemical Review Program contributes to EPA's pollution prevention efforts by preventing chemicals with the potential to pose unreasonable risks to human health or the environment from entering unrestricted into commerce. It is anticipated that approximately 3,000 new chemical submissions will be received in FY 1991, a 20 percent increase over FY 1990. The number of biotechnology notices is expected to double from 20 to 40, reflecting a continually growing market for genetically engineered microorganisms. EPA's General Biotechnology Rule and the section 5(h)(4) exemption rule for controlled and closed systems will be fully implemented by the end of FY 1991. The Agency continues to implement improved and more efficient ways for the new chemical program to perform its role, including the use of advanced technology to reduce costs for storage and retrieval of the hundreds of thousands of documents received each year. Savings from these reforms will help offset part of the increased program cost generated by the biotechnology effort.

The Existing Chemical Review Program aims to identify chemicals that pose potential risks to public health or the environment, characterize their risks, and, if unreasonable risks are found, take appropriate action. This program carries out its review function on hundreds of existing chemicals annually in order to identify those that pose unreasonable risks by pursuing a multi-faceted strategy:

- New data on chemicals are screened to identify possible problems;
- Data in the possession of industry on manufacturing and use of chemicals are requested on chemicals of concern;
- Industry is required to conduct studies and to do hazard testing to fill important data gaps on chemicals of concern;
- Annual data on emissions and discharges of toxic chemicals are collected and made available to the public and other environmental programs at the Federal, state, and local levels;
- Risk assessments are conducted on suspect chemicals to estimate the level of risk to human health and the environment;
- Risk management analyses are conducted on substances that pose significant risk to determine whether the risks are unreasonable and whether risk management controls should be imposed.

The Existing Chemical Review Program will focus on chemicals with the maximum potential for reducing risks through governmental intervention, and those which cannot be controlled effectively by other Federal regulatory programs. The program will continue to place special emphasis on controlling risks associated with asbestos and polychlorinated biphenyls (PCBs).

In FY 1991, the Chemical Testing Program (CTP) will focus on developing data to meet EPA's regulatory needs through greater use of multi-chemical testing rules. Issuance of these rules represents a major addition to traditional chemical-by-chemical rulemaking. As a result of modifications to Office of Toxic Substances (OTS) procedures for developing testing consent orders and a more streamlined rulemaking process, it will be possible for OTS to order chemical testing more efficiently. The CTP will continue to meet EPA's statutory obligations to respond to chemical candidates selected by the Interagency Testing Committee (ITC). There will be a continued effort to review test data and respond to test rule modifications. Concurrent with the efforts to strengthen the EPA testing program are major efforts internationally to seek greater cooperation in generating chemical testing data. The United States, through EPA participation in international meetings, has served as a leader in achieving this international cooperation. EPA will continue in this role in FY 1991.

Reduce Unnecessary Exposure, Especially by Preventing Pollution

EPA is actively encouraging voluntary reductions of emissions and exposure if there appears to be a high potential for significant risk, even before risk assessments and/or risk management analyses have been conducted. An important facet of this effort is the voluntary reduction that is already occurring as a result of the Emergency Planning and Community Right-to-Know Act (EPCRA). The

EPCRA Toxic Release Inventory (TRI) program collects and makes available to the public annual data on emissions and discharges of toxic substances. With the experience of the third reporting cycle completed, in 1991 we can look toward both improved data quality and a significantly shortened processing time. Experience and program improvements in FY 1991 should also provide improved accessibility and usability of the TRI database to aid EPA staff, the states, and the public in making decisions directed toward risk reduction and pollution prevention. EPA will continue to offer "start up" grants to states to encourage and help them to address data quality and to integrate the TRI data into their other programs.

Other programs to reduce unnecessary exposure and prevent pollution include the establishment of university centers for training and technical assistance in pollution prevention and the continuation of a major effort begun in 1990 to reduce exposure to lead.

One of our primary goals in managing asbestos and PCBs has been to eliminate unnecessary exposure. To ensure that the removal of PCBs and asbestos from continued use does not result in an actual increase in public health risk because of improper handling, the Agency is establishing in FY 1990 a Regional Toxics program to complement the existing toxic substances compliance program. This new program will work with the states to help them become more active in program operations for the Asbestos-in-Buildings and PCB programs. This effort will expand in 1991 to build a coordinated Federal/state program in these two areas.

In 1991 the Asbestos-in-Buildings program will continue to implement the key recommendations made in the 1988 Report to Congress on asbestos in public and commercial buildings, including studies to develop improved data on exposure to asbestos in public and commercial buildings and to evaluate various mitigation methods.

Encourage the Development of Safer Substitutes

Because more stringent risk management actions could be taken for many risky chemicals if safer substitutes were more readily available, the toxic substances program will implement a project to encourage industry to develop safer substitutes for existing chemicals of high and medium risk. Under this new project, the toxic substances program (calling on elements of both the new and existing chemical programs) will identify chemicals, chemical families, or product use areas for which the development and marketing of safer alternatives is needed. EPA will publish these findings as a part of its information gathering effort for existing chemicals. This should stimulate market forces to generate many needed substitutes.

Maximize Program Productivity

During FY 1989, major management reforms were initiated at headquarters in four separate areas to increase productivity (existing chemicals, new chemicals, chemical testing, and budgeting and planning). These reforms will be fully operational by the beginning of FY 1991, resulting in more efficient use of program resources. Examples of reforms in the existing chemicals area include an effort in the asbestos in buildings program to increase productivity by stimulating the development of stronger state, local, or private programs. The productivity of the PCB program will be improved by continuing to shift the Federal PCB focus from management of use to management of disposal. The Federal approach to PCBs will also be adjusted to provide a broader role for states in disposal and management of clean-up operations.

Ensure Strong Toxic Substances Enforcement

The Agency's toxic substances enforcement program is geared toward maintaining an efficient and effective national compliance monitoring program with appropriate coverage of all enforceable TSCA regulations. The enforcement program depends increasingly upon the assistance of state agencies which conduct compliance monitoring inspections under the terms of cooperative enforcement agreements. Thirty states currently participate in the TSCA cooperative agreement program and this number is expected to grow by 7 states in 1991. State programs emphasize compliance monitoring of existing chemical control rules, particularly for asbestos and PCBs. The states cannot initiate TSCA enforcement actions without meeting certain strict criteria of equivalency provided for in the law. Therefore, the Agency is responsible for case development and prosecution for all detected violations, whether originating from state- or EPA-conducted inspections. EPA intends to place additional emphasis on assisting states to enact appropriate authorities.

The enforcement program is placing a growing emphasis on conducting a comprehensive compliance program for asbestos and PCBs, including more frequent and comprehensive inspections at PCB disposal sites, and targeting inspections at brokers, storers and transporters of such materials.

The enforcement program also supports the enforcement provisions of the EPCRA Toxics Release Inventory (TRI). EPA's inspection program ensures that manufacturers, processors, and users of subject chemicals comply with Section 313 requirements to submit annual toxic chemical release forms. As the TRI program matures, additional emphasis will be placed on data quality compliance.

Ensure Strong Research and Development Support

The Office of Research and Development (ORD) will continue to support the Office of Toxic Substances (OTS) in 1991 by performing research in the areas of test method development and validation; biomarkers, dosimetry and extrapolation; exposure monitoring; environmental engineering and technology; special human data needs; structure activity relationships (SAR); ecology (both fate and transport and risk assessment); and biotechnology. In addition, ORD will continue to provide technical support to OTS in exposure assessment and monitoring procedures and risk assessment methodologies for oncogenicity, mutagenicity and reproductive toxicity. Research will be performed in the areas of lead pollution prevention and increased health and environmental effects work in biotechnology.

Consulting Services

Consulting services are used on an intermittent basis to supplement technical expertise needed in the asbestos program.

TOXIC SUBSTANCES

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase+ Decrease- 1991 vs. 1990
PROGRAM ACTIVITIES				
Incremental Outputs-				
Existing Chemical Review				
Section 8(e), FYI's Received	454	600*	600*	--
Section 8 Reports	1,152	1,320	1,500	+180
Section 8 and 5(a) Rules.....	16	11	10	-1
Preliminary Risk Assessments	4	10	12	+ 2
Detailed Risk Assessments....	2	3	5	+2
List 2 Inerts Screened.......	18	50	0	-50
PCB Disposal Permits.........	6	12	11	-1
Option Selections............	1	3	4	+1
Rulemakings..................	1	3	6	+3
Section 9 Referrals..........	1	1	1	--
PCB Exemptions	0	10	10	--
Asbestos Ban Exemptions......	0	15	15	--
New Chemical Review				
Rulemakings..................	1	2	3	+1
New Chemical Submissions.....	1,493	2,750	3,000	+250
New Chemical Control Actions	154	360	450	90
Biotechnology Notices........	6	20	40	+20
Biotechnology Control Actions	12**	10	20	+10
New Chemical SNURS...........	3	185	185	--
Receipt of Test Data.........	61	40	45	+5
Bona Fide Submissions........	467	500	600	+100
Commencement Notices.........	1,114	1,250	1,300	+50
Chemical Testing				
ITC Testing Actions..........	14	6	6	--
Non-ITC Testing Actions......	0	8	10	+2
Test Guidelines..............	1	2	2	--
Test Standard Modifications..	49	75	75	--
Interim Test Program Reviews	2	2	2	--
Final Test Program Reviews	3	3	4	+1

*1990 and 1991 projections may be seriously understated if newly implemented compliance follow-up efforts result in high volume of 8(e) submissions.

**Includes actions occurring in 1989 on prior year submissions.

TOXIC SUBSTANCES (continued)

	Actual 1989	Current Estimate 1990	Estimate 1991	Increase+ Decrease- 1991 vs. 1990
PROGRAM ACTIVITIES				
Incremental Outputs				
Title III				
TRI Forms Received..........	87,000	110,000	130,000	+20,000
TRI Forms Processed.........	91,000	95,000	98,000	+3,000
Notices of Noncompliance....	3,000	10,000	10,000	--
Receipt of Corrected Forms..	25,000	30,000	30,000	--
Petitions Received..........	10	10	10	--
On-Site Technical Audits....	200	100	100	--
Suspect Tech. Data Review...	1,000	1,000	1,000	--
Rulemakings.................	0	3	2	-1
Asbestos-in-Schools Loans and Grants				
Abatement Projects Funded...	401	400	--	--
Weekly Exposure Hrs. Reduced.	4,000,000	4,000,000	--	--
Asbestos-in-Buildings*				
Abatement Projects Closed Out	370	500	500	--
State Programs Developed....	11	11	16	+5
Enforcement Actions				
EPCRA Inspections...........	768	669	700	+31
Laboratory Inspections......	10	13	13	---
Test Study Audits...........	47	72	72	---
Inspections, Sec. 5.........	249	129	129	---
Inspections, Sec. 6				
PCB Inspections**..........	2,456	2,440	3,000	+560
Asbestos Inspections**.....	1,548	1,473	3,000	+1,527
Hexavalent Chromium........	---	---	100	+100
Inspections, Sec. 8.........	258	120	120	--

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*1989 outputs were accomplished under Asbestos-in-Schools Program Administration and Contractor Certification programs, which are merged in 1990 into the Asbestos-in-Buildings program.

**Includes Federal, state and contractor inspections

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TOXIC SUBSTANCES
Toxic Substances Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PROGRAM					
Scientific Assessment - Toxic Substances					
Salaries & Expenses	$123.1	$120.2	$118.7	$272.0	$153.3
Research & Development	$3.6	$54.7	$53.5	$155.0	$101.5
TOTAL	$126.7	$174.9	$172.2	$427.0	$254.8
Monitoring Systems & Quality Assurance - Toxic Substances					
Salaries & Expenses	$1,446.0	$1,531.0	$1,510.4	$1,705.0	$194.6
Research & Development	$3,473.3	$3,761.2	$3,707.2	$3,806.5	$99.3
TOTAL	$4,919.3	$5,292.2	$5,217.6	$5,511.5	$293.9
Health Effects - Toxic Substances					
Salaries & Expenses	$3,502.2	$3,471.0	$3,423.6	$3,925.0	$501.4
Research & Development	$7,304.0	$5,421.0	$5,266.7	$5,484.7	$218.0
TOTAL	$10,806.2	$8,892.0	$8,690.3	$9,409.7	$719.4
Environmental Engineering & Technology - Toxic Substances					
Salaries & Expenses	$629.6	$627.1	$649.8	$693.0	$43.2
Research & Development	$1,641.2	$1,982.3	$1,923.4	$2,375.7	$452.3
TOTAL	$2,270.8	$2,609.4	$2,573.2	$3,068.7	$495.5
Environmental Processes & Effects - Toxic Substances					
Salaries & Expenses	$5,515.0	$5,345.3	$5,273.3	$5,729.3	$456.0
Research & Development	$4,332.0	$4,963.3	$4,818.3	$4,460.0	-$358.3
TOTAL	$9,847.0	$10,308.6	$10,091.6	$10,189.3	$97.7
TOTAL:					
Salaries & Expenses	$11,215.9	$11,094.6	$10,975.8	$12,324.3	$1,348.5
Research & Development	$16,754.1	$16,182.5	$15,769.1	$16,281.9	$512.8
Toxic Substances Research TOTAL	$27,970.0	$27,277.1	$26,744.9	$28,606.2	$1,861.3
PERMANENT WORKYEARS					
Scientific Assessment - Toxic Substances	1.8	2.0	2.0	2.0	0.0
Monitoring Systems & Quality Assurance - Toxic Substances	22.3	25.0	25.0	25.0	0.0
Health Effects - Toxic Substances	59.6	62.4	62.4	62.4	0.0

TOXIC SUBSTANCES
Toxic Substances Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Environmental Engineering & Technology - Toxic Substances	10.4	11.0	10.6	10.6	0.0
Environmental Processes & Effects - Toxic Substances	77.3	85.5	85.5	85.5	0.0
TOTAL PERMANENT WORKYEARS	171.4	185.9	185.5	185.5	0.0
TOTAL WORKYEARS					
Scientific Assessment - Toxic Substances	1.8	2.0	2.0	2.0	0.0
Monitoring Systems & Quality Assurance - Toxic Substances	23.5	25.0	25.0	25.0	0.0
Health Effects - Toxic Substances	62.5	62.4	62.4	62.4	0.0
Environmental Engineering & Technology - Toxic Substances	10.4	11.0	10.6	10.6	0.0
Environmental Processes & Effects - Toxic Substances	83.6	85.5	85.5	85.5	0.0
TOTAL WORKYEARS	181.8	185.9	185.5	185.5	0.0

TOXIC SUBSTANCES

Toxic Substances Research

Principal Outputs by Objective

Objective 1: Develop and Validate Test Methods in Support of TSCA Studies

1991: o Evaluate the effects of maternal deprivation on postnatal maturation (Health).

o Report on infared database for analysis of toxic organics (Monitoring).

1990: o Report on chemometric research (Monitoring).

o Report on determining dose for small aquarium fish used in chronic bioassays (Environmental Processes).

Objective 2: Perform Research on Biological Markers, Dosimetry and Extrapolation

1991: o Development of methods to structurally identify and quantitate specific environmental chemicals to DNA adducts (Health).

o Evaluation of biological models for prediction of tumorigenesis for asbestos and other mineral fibers (Health).

1990: o Evaluation of potential use for biological markers in human exposure monitoring studies (Monitoring).

Objective 3: Provide Information on Special Human Data Needs

1991: o Develop biochemical procedures as measures of human exposure and early indicators of disease processes (Health).

1989: o Report on the effects of asbestos exposure on teachers (Health).

Objective 4: Perform Ecological Research Including Transport, Fate and Field Validation

1991: o Report on comparative acute sensitivity of selected esturaine crustaceans to toxic substances (Environmental Processes).

o Report describing selected SAR relations in uptake of six chemicals by soybean plants (Environmental Processes).

1990: o Report on microbial transformation rate constants of structurally diverse man-made chemicals (Environmental Processes).

- o Report on effects of chemicals on the immune system in wild and laboratory Avians (Environmental Processes).

1989: o Report on an evaluation of cluster analysis techniques for determining community level effects (Environmental Processes).

Objective 5: Perform Engineering Research in Support of TSCA

1991: o Report on the feasibility of a testing/certification program for asbestos equipment and materials (Engineering).

- o Report on emission estimates for welding, cutting, and grinding operations (Engineering).

1990: o Report on in-use effectiveness of negative air systems (Engineering).

- o Report on asbestos removal via glove bags operated under a partial vacuum (Engineering).
- o Report on the effectiveness of two cleaning methods to remove asbestos from carpet (Engineering).

1989: o Developed a protocol superior to the conventional method, for the sampling of new full- and half-face respirators (Engineering).

- o Case-study evaluation of airborne-asbestos concentrations before and during an O&M activity (Engineering).
- o Determined the effect of the addition of C,I. Disperse Blue #79, and azo dye, on the operation of an activated sludge system and an anaerobic digester, and the dye's fate in the treatment systems (Engineering).

Objective 6: Perform Exposure Monitoring Research

1991: o Human Exposure Assessment Location Project - Report on FY 1990 Activities (Monitoring).

- o Report on blood/breath monitoring for total human exposure to toxic pollutants (Monitoring).
- o Progress report on modeling pollutant sources and human activity patterns associated with exposure to toxic pollutants (Monitoring).

Objective 7: Develop Structure Activity Relationships Data

1991: o Develop SAR methods and data bases to allow accurate prediction of the mutagenic and carcinogenic effects of chemicals based on structural and physiochemical parameters (Health).

- o Report on human exposure monitoring at SARA sites (Monitoring).

1990: o Report documenting application of expert systems for predicting reactivity parameters for PMN chemicals (Environmental Processes).

o Report on methods to compute reactivity parameters for electrophiles (Environmental Processes).

o Report on analytical methods for SARA chemicals (Monitoring).

1989: o Progress report on methods to predict toxic mechanisms from chemical structures (Environmental Processes).

Objective 8: Perform Research In Biotechnology

1991: o Development of methods to determine host species and route of exposure differences as they apply to pathogenicity (Health).

1990: o Report on the survival, persistence, and expression of genetically engineered viruses in-vitro and in-vivo under laboratory conditions (Health).

o Report on test methods for an enclosed terrestrial microcosm for evaluating fate and effects of GEMs in terrestrial systems (Environmental Processes).

o Report on evaluation of selected biochemical and ecological methods to assess effects of recombinant bacteria in terrestrial ecosystems (Environmental Processes).

o Report on half-life or aerosolized bacteria (Monitoring).

1989: o Review of progress in biotechnology/MPCA Risk Assessment Program (Environmental Processes).

Objective 9: Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols

1991: o General bed-water exchange model for risk assessment (Environmental Processes).

o Report on the relation of project results to regulatory criteria and standards (Environmental Processes).

1990: o Users manual for updating stratified lake transport model for risk assessment (Environmental Processes).

o Population model and software incorporating lethal and non-lethal effects on feeding behavior for chemicals that act by reversible modes of action (Environmental Processes).

1989: o Report on biological data base for risk assessment (Environmental Processes).

Objective 10: Provide Support Services for TSCA Studies

1991: o Guidelines for use of human exposure model in regulatory review and report on production of reference materials for quality control (Monitoring).

1990: o Report on computer aided techniques for use in human exposure assessment (Monitoring).

1989: o Report on asbestos quality assurance research activities (Monitoring).

Objective 12: Asbestos

1991: o Report on methods development activities for asbestos monitoring (Monitoring).

1990: o Report on methods development activities for asbestos monitoring (Monitoring).

TOXIC SUBSTANCES

Toxic Substances Research

Budget Request

The Agency requests a total of $28,606,200 supported by 185.5 total workyears for 1991, an increase of $1,861,300 and no change in total workyears from FY 1990. Of the request, $12,324,300 will be for the Salaries and Expenses appropriation, and $16,281,900 for the Research and Development appropriation, an increase of $1,348,500 and $512,800, respectively.

Program Objectives

The Toxic Substances research program supports the Office of Toxic Substances (OTS) by providing the scientific tools and supporting information needed to implement the Pre-Manufacture Notification (PMN) for new chemicals under the Toxic Substances Control Act (TSCA), the Asbestos Hazard Emergency Response Act (AHERA) and the Emergency Planning and Community Right-to-Know Act (EPCRA).

Objective 1. Develop and Validate Test Methods for TSCA Studies. This research develops and validates health exposure and environmental testing protocols to be incorporated into TSCA Section 4 guidelines, risk assessment methods, and analytical methods for identifying and quantifying environmental pollutants.

Objective 2. Perform Health Research on Biological Markers, Dosimetry and Extrapolation. This research develops methods for extrapolating from high to low doses between mammalian species to enhance risk assessment predictability and capability. Research also focuses on developing biomonitoring techniques, and applying biological markers as indicators of exposure and effects to the study of populations exposed to toxicants.

Objective 3. Provide Information on Special Human Data Needs. This activity focuses on investigations of human populations exposed to environmental pollutants. This research will help determine whether biological indicators of dose and/or effects are related to environmental levels of exposure and if they are correlated with adverse effects measured by traditional methods. This research provides an important component to the Agency's overall ability to accurately estimate risks from exposure to chemicals and make regulatory decisions under TSCA.

Objective 4. Perform Ecological Research Including Transport, Fate, and Field Validation. This research focuses on developing and conducting exposure and hazard assessments of chemicals in water, air, and multimedia environments. This research is conducted in response to the TSCA requirement that the Agency take into account ecological risks when making regulatory decisions. Research focuses on inclusion of identified transport and transformation processes, pathways of exposure, population characteristics, environmental features, and hazard assessment techniques.

Objective 5. Perform Engineering Research in Support of TSCA. This research focuses on the development of information to predict the release of and worker exposure to new and existing chemicals. This research addresses those classes of chemicals for which the Agency does not have adequate information on the degree to which unit operations and existing control systems limit their release as a result of technically based research, allowing for more effective Pre-Manufacture Notification (PMN) decisions to be made.

Objective 6. Perform Exposure Monitoring Research. This research develops methods, evaluates data bases, and statistical tools to improve exposure monitoring. Multimedia monitoring methods and data analysis techniques are designed and tested to characterize human exposure to chemicals of concern.

Objective 7. Develop Structure Activity Relationships Data. These research develop predictive methods (Structure Activity Relationships (SAR)) to provide a tool for determining whether new chemicals pose unreasonable risk or require further testing. Structure activity relationships (SAR) data are important for reviewing and screening PMN chemicals under Section 5 of TSCA. Findings and techniques established by this research will be used to select appropriate toxicity tests, to document test results, to develop fate and effects data bases, and to provide the modeling means to predict toxicity.

Objective 8. Perform Research on Biotechnology. This research develops methods to assess the potential health exposure, risk, and environmental hazards of biotechnology production and products. Methods are also being developed to monitor, contain, and destroy genetically engineered microorganisms (GEMs) from releases and manufacturing processes.

Objective 9. Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. This research focuses on development of methodologies and models to determine risks posed to ecosystems by exposure to environmental pollutants. This research is currently developing environmental risk assessment protocols for both aquatic and terrestrial systems, which will be used in evaluating risks from both new and existing chemicals.

Objective 10. Provide Support Services for TSCA Studies. This research provides support for risk and exposure assessments, quality assurance, dissemination of reference standards and quality assurance reagents, as well as, expert consultation on problems associated with the evaluation of PMN chemicals and other toxic substances.

Objective 11. Perform Research on Emergency Planning and Community Right-to-Know (SARA Title III). This research evaluates and validates emission-estimation techniques and monitoring methods to be used by industry and the Office of Toxic Substances in support of the Emergency Planning and Community Right-to-Know Act (EPCRA).

Objective 12. Perform Asbestos Research. Research focuses on evaluating asbestos measurement procedures, abatement, in-place operation and maintenance and control technologies, and development of standardized sampling techniques for asbestos in support of the Asbestos Hazard Emergency Response Act (AHERA).

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $427,000 supported by 2.0 total workyears for this program, of which $272,000 will be for Salaries and Expenses appropriation and $155,000 will be for the Research and Development appropriation. This represents an increase of $153,300 in the Salaries and Expenses appropriation and $101,500 in the Research and Development appropriation and no change in total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The increase in the Research and Development appropriation will be used to fund new research in lead pollution prevention.

Provide Support Services for TSCA Studies. Support will be provided for preparation, consultation, and review on OTS generated assessments of carcinogenicity, mutagenicity, adverse reproductive/ developmental effects, and exposure. These activities will support decision making under TSCA (existing chemicals program, PMN review, and test guidelines and rule development).

Perform Research on Emergency Planning and Community Right to Know (SARA Title III). To support implementation of EPCRA, profiles will be prepared and installed into the Integrated Risk Information System (IRIS) to provide public information on the health effects of chemicals released into the environment.

1990 Program

In 1990, the Agency is allocating a total of $172,200 supported by 2.0 total workyears for this program, of which $118,700 is from the Salaries and Expenses appropriation and $53,500 is from the Research and Development appropriation.

The 1990 research program is providing support for the review of risk and exposure assessments and developing protocols for risk assessments.

1989 Accomplishments

In 1989, the Agency obligated a total of $126,700 supported by 1.8 total workyears for this program, of which $123,100 was from the Salaries and Expenses appropriation and $3,600 was from the Research and Development appropriation.

In 1989, research activities included a revieval of the test rule on tetramethylene diisocyanate, and conducting a developmental and reproductive risk assessment course.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $5,511,500 supported by 25.0 total workyears for this program, of which $1,705,000 will be for the Salaries and Expenses appropriation and $3,806,500 will be for the Research and Development appropriation. This represents increases of $194,600 in the Salaries and Expenses appropriation and $99,300 in the Research and Development appropriation. There is no change in total workyears. The increases in the Salaries and Expenses appropriation reflect increased personnel and support costs. The increase in the Research and Development appropriation will be used to fund additional monitoring methods research.

Develop and Validate Test Methods for TSCA Studies. Research will focus on developing and evaluating instruments, analytical methods and procedures to identify and quantify chemical compounds in environmental media, and biological tissues and fluids. This research will emphasize bioassays, immunochemistry, multi-residue analysis procedures, and developing chemometric approaches.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Genetic, immunological, and biochemical biomarkers for their suitability as indicators of exposure to pollutants will be evaluated. These biomarkers will provide more flexible human exposure monitoring for chemical pollutants which cannot be studied by conventional analytical chemistry procedures. Laboratory studies will be conducted to obtain data about the specificity and sensitivity of biomarkers to indicate exposure.

Perform Exposure Monitoring Research. Human exposure to toxic substances via multiple pathways will be studied to improve and expand the Total Exposure Assessment Methodology (TEAM). Microenvironmental studies will be used to determine human activity patterns. Human exposure models will be developed and evaluated using TEAM data and human activity pattern information from microenvironment models. Breath measurements will be made to obtain human exposure data for models.

Perform Research on Biotechnology. Standardized monitoring procedures and methods for sampling genetically engineered microorganisms will be developed to measure routine releases of GEMs into the environment. Factors important in GEMs dispersal and persistence will be identified and described.

Provide Support Services for TSCA Studies. Monitoring and quality assurance (QA) guidelines for bioassays data management procedures will be produced. Computerized approaches for risk evaluation (CARE) will be tested by application of geographic information system (GIS) technology to existing exposure data in a contaminated area.

Perform Research on Emergency Planning and Community Right to Know (SARA Title III). Under EPCRA, validated sampling and analytical methods will be provided to OPTS to support environmental and human exposure monitoring investigations of chemical releases. Research will be conducted to use GIS technology to model environmental pollution from multimedia emission sources.

Perform Asbestos Research. Research will support the implementation of the Asbestos Hazard Emergency Response Act (AHERA) by improving sampling and analysis protocols to monitor exposure to airborne asbestos and durable fibers.

1990 Program

In 1990, the Agency is allocating a total of $5,217,600 supported by 25.0 total workyears for this program, of which $1,510,400 is from the Salaries and Expenses appropriation and $3,707,200 is from the Research and Development appropriation.

The 1990 research program includes research on exposure monitoring, analytical methods and providing quality assurance and assessment activities support for exposure assessment.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,919,300 supported by 23.5 total workyears for this program, of which $1,446,000 was from the Salaries and Expenses appropriation and $3,473,300 was from the Research and Development appropriation.

Biological monitoring methods and biomarkers were evaluated for their possible use in human exposure monitoring studies. Quality assurance materials for asbestos and organic chemicals were produced. Bioassay tests were standardized. A preliminary model of human exposure to benzene was constructed.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $9,409,700 supported by 62.4 total workyears for this program, of which $3,925,000 will be for the Salaries and Expenses appropriation and $5,484,700 will be for the Research and Development appropriation. This represents an increase of $501,400 in the Salaries and Expenses appropriation and an increase of $218,000 in the Research and Development appropriation. There is no change in total workyears. The increase in Salaries and Expenses appropriation reflects increased personnel and support costs. The increase in the Research and Development appropriation reflect increased biotechnology research.

Develop and Validate Test Methods for TSCA Studies. Health research will focus on developing bioassay methods for predicting non-cancer endpoints, with particular emphasis on neurotoxicity, immunotoxicity and developmental effects. These methodologies will be used to evaluate industry submitted data on health effects of new chemicals to provide test guidelines which ensure that the data is accurate, reproducible, and consistent.

Perform Health Research on Biological Markers, Dosimetry and Extrapolation. Improved techniques for extrapolation from animal data to assess human health risks will be developed. This research provides an important component to the risk assessment process. Emphasis will be on target organ dosimetry (including oral, dermal, and inhalation routes of exposure), to determine if the equivalent doses reaching the target site produce equivalent effects. Biological markers of exposure will also be investigated.

Provide Information On Special Human Data Needs. Research will examine the application of biological markers to human populations groups exposed to environmental contaminants which are suspect toxicants. Chemical data bases will be constructed for particular areas of toxicological response, including mutagenic and carcinogenic potential.

Develop Structure Activity Relationships Data. Methods for predicting enzymatic, mutagenic, carcinogenic, and other biological activities from molecular structures of chemicals will be developed using pattern recognition, statistical, and thermodynamic techniques. Research results provide a rapid method for predicting effects of new chemicals based on known data for chemicals of similar structure.

Perform Research on Biotechnology. Potential dispersal capability of bioengineered organisms will be studied, along with their potential health hazards. Health studies will compare the effects of these organisms and naturally occurring strains on mammalian gut flora. Research will also be initiated to determine the interaction on invertebrate viruses with human and other vertebrate cells. This research supports the PMN review process for biotechnology products.

1990 Program

In 1990, the Agency is allocating a total of $8,690,300 supported by 62.4 total workyears for this program, of which $3,423,600 is from the Salaries and Expenses appropriation and $5,266,700 is from the Research and Development appropriation.

The 1990 research program is developing test methods in support of TSCA Section 4 test guidelines, conducting research on extrapolation, biological markers, structure activity relationships, and assessing potential health effects from genetically engineered organisms.

1989 Accomplishments

In 1989, the Agency obligated a total of $10,806,200 supported by 62.5 total workyears for this program, of which $3,502,200 was from the Salaries and Expenses appropriation and $7,304,000 was from the Research and Development appropriation.

Research accomplishments included a summary report for human and biomarkers research on cancer, and a critical appraisal of the functional observation battery (FOB) and motor activity (MA) as a screen for acute neurotoxicity.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $3,068,700 supported by 10.6 total workyears for this program, of which $693,000 will be for the Salaries and Expenses appropriation and $2,375,700 will be for the Research and Development appropriation. This represents an increase of $43,200 in the Salaries and Expenses appropriation and $452,300 in the Research and Development appropriation, respectively. There is no change in total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs for the operation of a total materials containment facility. The increase in the Research and Development appropriation reflects new research in lead pollution prevention.

Perform Engineering Research in Support of TSCA. Techniques for predicting toxic releases and exposures from processing and manufacturing new chemicals will be developed. Research on priority dye-class compounds, as determined by the Interagency Testing Committee, will focus on improving their treatability in wastewater systems with respect to their toxicity.

Perform Research on Biotechnology. An improved qualitative model will be developed for the state-of-the-art biotechnology processing equipment. Research will be initiated to investigate operator/process-equipment interactions, and actual plant data on the source and approximate magnitude of release and worker exposure that will be acquired based on actual field tests. Evaluation of this research supports the TSCA requirement to evaluate biotechnology products for workplace exposure during manufacturing and processing.

Perform Research on Emergency Planning and Community Right to Know (SARA Title III). Research will focus on identifying important chemicals and industrial centers in order to enhance the reliability of decisions based on Section 313 chemicals data.

Perform Asbestos Research. Asbestos research will evaluate existing techniques for asbestos abatement and characterize their effectiveness and cost. Comprehensive tests of removal and containment techniques will be made under controlled conditions to determine their utility. Research shall emphasize the ability to remove or contain small fibers.

1990 Program

In 1990, the Agency is allocating a total of $2,573,200 supported by 10.6 total workyears for this program, of which $649,800 is from the Salaries and Expenses appropriation and $1,923,400 is from the Research and Development appropriation.

The 1990 research program is developing information on release, exposure and control measures for new and existing chemicals in the workplace, including genetically engineered organisms.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,270,800 supported by 10.4 total workyears for this program, of which $629,600 was from the Salaries and Expenses appropriation and $1,641,200 was from the Research and Development appropriation.

In 1989, a report on the addition of C.I. Disperse Blue #79, an azo dye, on the operation of an active sludge system, anaerobic digesters, and the dye's fate in the treatment system was produced.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $10,189,300 supported by 85.5 total workyears for this program, of which $5,729,300 will be for the Salaries and Expenses appropriation and $4,460,000 will be for the Research and Development appropriation. This represents increases of $456,000 in the Salaries and Expenses appropriation and a decrease of $358,300 in the Research and Development appropriation. There is no change in total workyears. The increase in the Salaries and Expenses appropriation reflects increased personnel and support costs. The decrease in the Research and Development appropriation reflects a reprogramming of resources used to fund equipment for the new biotechnology facility at the Gulf Breeze laboratory.

Develop and Validate Test Methods for TSCA Studies. Test methods for assessing the impact of existing and potentially toxic chemicals on freshwater, marine estuarine organisms, and on habitat alterations will be developed and evaluated. Tests on bioavailability, comparisons of hazard ranking, and of single species effects (e.g., carcinogenicity) will be improved. Such information will directly support development of TSCA Section 4 guidelines.

Perform Ecological Research Including Transport, Fate and Field Validation. Predictive methodologies/models for conducting chemical exposure and effects assessments in freshwater, estuarine/marine water, groundwater, air, terrestrial, and total ecosystems will be developed. Mathematical models will be validated for use as reliable simulators and predictors of the movement, transformation, exposure concentrations, and fate of toxic chemicals through ecosystems. Studies will be conducted in microcosms and field scale mesocosms to address problems related to comparative toxicology, system-level effects, hazard evaluations, and terrestrial plant and wildlife toxicology. This research will support the TSCA PMN process and Section 4 test rule development.

Develop Structure Activity Relationships Data. Research will determine toxicity and preform risk estimates for PMN and EPCRA chemicals submitted under TSCA Section 5. This includes Quantitative Structure Activity Relationships (QSAR) on typical PMN chemicals, documentation of test results on PMN analogs, and developing Structure Activity Relationships (SAR) methodologies and other estimation techniques. Research will include data base compilation, chemicals testing (modes of action, genotoxic potential), and development of SAR type correlations.

Perform Research on Biotechnology. Methods, analytical techniques, and testing protocols for estimating survival, fate, and effects of microorganisms released to the environment; and the stability within their genetic pool will be developed. Methods will be developed for detecting gene persistence and transfer. The collected data and developed protocols will be compiled for use by OPTS in their evaluations of PMNs for biotechnology products.

Perform Studies on Ecotoxicity and Develop Environmental Risk Assessment Protocols. Mathematical models, support data, and appropriate protocols to determine exposure and hazard assessments for ecosystems will be provided. Predictive models and methodology will be subjected to field testing. Ecosystem impacts and recovery potential will be determined. These environmental risk assessment methods will substantially enhance the Agency's ability to regulate chemicals under Sections 4 and 5 of TSCA.

Provide Support Services for TSCA Activities. Environmental process research will support OTS on complex problems relating to environmental fate, exposure, effects, hazard and environmental risk of toxic chemicals and bioengineered organisms.

1990 Program

In 1990, the Agency is allocating a total of $10,091,600 supported by 85.5 total workyears for this program, of which $5,273,300 is from the Salaries and Expenses appropriation and $4,818,300 is from the Research and Development appropriation.

This research program is developing test methods in support of TSCA Section 4 guidelines; conducting research on transport, fate, and field validation; and developing chemical structure activity relationships data. Research is also being performed on the development of environmental risk assessment methods, as well as research to determine the environmental effects of genetically engineered organisms.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,847,000 supported by 83.6 total workyears for this program, of which $5,515,000 was from the Salaries and Expenses appropriation and $4,332,000 was from the Research and Development appropriation.

In 1989, research activities included a report on the SAR methods for predicting metabolism from chemical structure.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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TOXIC SUBSTANCES
Toxic Substances - Financial Assistance

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Asbestos-In-School - Abatement Loans and Grants						
Abatement Control and Compliance		$44,598.9	$44,007.3	$43,443.0		-$43,443.0
	TOTAL	$44,598.9	$44,007.3	$43,443.0		-$43,443.0
Asbestos-In-School - Program Administration						
Salaries & Expenses		$548.1				
Abatement Control and Compliance		$4,442.8				
	TOTAL	$4,990.9				
Asbestos-In-School - Contractor Certification Program						
Abatement Control and Compliance		$798.9				
	TOTAL	$798.9				
TOTAL:						
Salaries & Expenses		$548.1				
Abatement Control and Compliance		$49,840.6	$44,007.3	$43,443.0		-$43,443.0
Toxic Substances - Financial Assistance	TOTAL	$50,388.7	$44,007.3	$43,443.0		-$43,443.0
PERMANENT WORKYEARS						
Asbestos-In-School - Program Administration		12.2				
TOTAL PERMANENT WORKYEARS		12.2				
TOTAL WORKYEARS						
Asbestos-In-School - Program Administration		12.3				
TOTAL WORKYEARS		12.3				

TOXIC SUBSTANCES

Toxic Substances Financial Assistance

Budget Request

The Agency requests no funding under this subactivity in 1991. All asbestos-related activities and resources for 1991 are found within the Toxic Substances Strategies subactivity, under the Asbestos in Buildings program. There is a decrease of $43,443,000 for this subactivity from 1990, all of which is in the Abatement, Control and Compliance appropriation.

ASBESTOS-IN-SCHOOLS LOANS AND GRANTS

1991 Program Request

No funds are requested for this program in 1991. This represents a decrease of $43,443,000 for Abatement, Control and Compliance. The Agency has elected not to request funds for loans and grants for asbestos abatement in schools. Federal resources under this program in previous years (approximately $245,000,000 through 1990) have greatly alleviated the need for a continuing Federal role. By 1991 all schools should be well along in implementing their asbestos management plans. Further, many states have initiated asbestos management and contractor accreditation programs for schools and are expected to continue these activities.

1990 Program

In 1990, the Agency is allocating $43,443,000 for the Asbestos School Hazard Abatement Act (ASHAA) loan and grant program, all of which is from the Abatement, Control and Compliance appropriation, to help local education agencies (LEAs) with serious financial need to abate asbestos hazards. Under this program, the Agency solicits applications from schools, ranks applications in terms of hazard and need, and makes award determinations in consultation with the states.

1989 Accomplishments

In 1989, the Agency obligated a total of $44,598,900 for this program, all of which was from the Abatement, Control and Compliance appropriation.

The Agency made awards, as either grants or interest-free loans, to 231 public school districts and private schools for 401 individual abatement projects, mostly removals of asbestos-containing materials. As of 1989 EPA had awarded more than $200,000,000 to about 875 LEAs to fund nearly 2,200 individual abatement projects. These EPA-funded projects are estimated to eliminate 17.3 million hours of exposure to asbestos fibers to students, teachers and staff each week.

ASBESTOS-IN-SCHOOLS PROGRAM ADMINISTRATION

1991 Program Request

Funding for this program is being requested under the Asbestos in Buildings program in 1991.

1990 Program

Funding for this program is being allocated under the Asbestos in Buildings program in 1990.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,990,900 supported by 12.3 total workyears for this program, of which $548,100 was from the Salaries and Expenses appropriation and $4,442,800 was from the Abatement, Control and Compliance appropriation.

In 1989, EPA conducted close-out site evaluations of asbestos projects for which ASHAA funds were awarded in previous years to ensure loan repayment and that proper abatement was attained. Also in 1989 the Agency began to implement the four major recommendations of the Asbestos Hazard Emergency Response Act (AHERA) public buildings study completed in 1988. EPA produced guidance, training materials, model state programs, and other technical assistance materials in support of asbestos management and abatement projects in public and commercial buildings as well as in schools. Regional technical assistance was provided for EPA's ASHAA and AHERA school assistance program. A formal plan for research on indoor asbestos exposure levels, in cooperation with the Health Effects Institute (HEI), was negotiated in 1989, with the research to begin in 1990.

ASBESTOS-IN-SCHOOLS CONTRACTOR AND INSPECTOR CERTIFICATION

1991 Program Request

Funding for this program is being requested under the Asbestos in Buildings program in 1991.

1990 Program

Funding for this program is being allocated under the Asbestos in Buildings program in 1990.

1989 Accomplishments

The Agency obligated a total of $798,900 for this program, all of which was from the Abatement, Control and Compliance appropriation.

In 1989, the Agency conducted AHERA accreditation activities, state support programs, and outreach and compliance assistance for the requirements of the AHERA schools rule. EPA provided training materials and technical guidance documents for building owners, managers and workers, developed thermal system insulation asbestos abatement training course materials and guidance, and initiated an evaluation of the AHERA schools rule.

TOXIC SUBSTANCES

Toxic Substances Strategies

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Chemical Testing						
Salaries & Expenses		$4,655.6	$4,138.9	$3,498.1	$3,523.0	$24.9
Abatement Control and Compliance		$3,562.0	$2,892.7	$2,449.6	$2,262.3	-$187.3
	TOTAL	$8,217.6	$7,031.6	$5,947.7	$5,785.3	-$162.4
Existing Chemical Review						
Salaries & Expenses		$5,608.8	$6,485.3	$9,203.1	$9,566.0	$362.9
Abatement Control and Compliance		$5,952.2	$7,782.5	$8,345.9	$8,370.7	$24.8
	TOTAL	$11,561.0	$14,267.8	$17,549.0	$17,936.7	$387.7
New Chemical Review						
Salaries & Expenses		$12,786.1	$13,720.4	$8,174.8	$9,734.0	$1,559.2
Abatement Control and Compliance		$7,867.5	$8,310.3	$7,220.1	$7,611.2	$391.1
	TOTAL	$20,653.6	$22,030.7	$15,394.9	$17,345.2	$1,950.3
Asbestos In Buildings						
Salaries & Expenses			$597.5	$1,304.6	$1,449.0	$144.4
Abatement Control and Compliance			$10,808.7	$10,670.7	$6,234.6	-$4,436.1
	TOTAL		$11,406.2	$11,975.3	$7,683.6	-$4,291.7
Regional Toxics Program						
Salaries & Expenses			$426.9	$431.5	$695.0	$263.5
Abatement Control and Compliance					$250.0	$250.0
	TOTAL		$426.9	$431.5	$945.0	$513.5
TOTAL:						
Salaries & Expenses		$23,050.5	$25,369.0	$22,612.1	$24,967.0	$2,354.9
Abatement Control and Compliance		$17,381.7	$29,794.2	$28,686.3	$24,728.8	-$3,957.5
Toxic Substances Strategies	TOTAL	$40,432.2	$55,163.2	$51,298.4	$49,695.8	-$1,602.6

TOXIC SUBSTANCES
Toxic Substances Strategies

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PERMANENT WORKYEARS					
Chemical Testing	69.6	76.2	65.8	60.8	-5.0
Existing Chemical Review	103.8	120.0	158.7	165.1	6.4
New Chemical Review	246.3	252.6	154.0	168.0	14.0
Asbestos In Buildings		11.0	25.0	25.0	0.0
Regional Toxics Program		10.0	9.1	15.1	6.0
TOTAL PERMANENT WORKYEARS	419.7	469.8	412.6	434.0	21.4
TOTAL WORKYEARS					
Chemical Testing	71.1	76.2	65.8	60.8	-5.0
Existing Chemical Review	108.8	120.0	158.7	165.1	6.4
New Chemical Review	260.6	252.6	154.0	168.0	14.0
Asbestos In Buildings		11.0	25.0	25.0	0.0
Regional Toxics Program		10.0	10.1	15.1	5.0
TOTAL WORKYEARS	440.5	469.8	413.6	434.0	20.4

TOXIC SUBSTANCES

Toxic Substances Strategies

Budget Request

The Agency requests a total of $49,695,800 supported by 434 total workyears for 1991, a decrease of $1,602,600 and an increase of 20.4 total workyears from 1990. Of the request, $24,967,000 will be for the Salaries and Expenses appropriation, and $24,728,800 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,354,900 in the Salaries and Expenses appropriation and a decrease of $3,957,500 in the Abatement, Control and Compliance appropriation.

CHEMICAL TESTING

1991 Program Request

The Agency requests a total of $5,785,300 supported by 60.8 total workyears for this program, of which $3,523,000 will be for the Salaries and Expenses appropriation and $2,262,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $24,900 for Salaries and Expenses, a decrease of $187,300 for Abatement, Control and Compliance, and a decrease of 5.0 total workyears. The decreases reflect implementation of more efficient procedures for developing testing consent orders, rulemaking, and conducting literature searches and data evaluations.

In 1991 there will continue to be two facets to the Chemical Testing Program (CTP): responses to the Interagency Testing Committee (ITC) and non-ITC initiatives. Major non-ITC actions for consideration in 1991 include: a screening test rule using the international Screening Information Data Set (SIDS) under development by the Organization for Economic Cooperation and Development (OECD); a screening rule for the Superfund Amendments and Reauthorization Act (SARA) section 313 chemicals lacking critical basic data; a final rule on chlorofluorocarbons (CFCs); an OPTS-initiated rule on major health endpoints for high volume solvents; a SARA section 110 rule covering the Tox-Profile chemicals; one or more client rules; and three endpoint test rules (one final; two proposed). The SIDS screening rule is part of an overall effort to seek international cooperation and coordination in generating chemical test data. The ITC Test Rule Program is expected to have a decrease in actions resulting from a decision not to pursue testing for candidates that appear marginal or appear to raise scientific issues which require substantial resources to resolve. Response to anticipated ITC recommendations are expected to include 3 initial actions, 3 post initial actions, and 4 final actions. However, these numbers may change as a result of the actual chemicals listed by the ITC. Data development will begin on the 27th and 28th ITC lists. Procedural rules include one final rule revising the consent order process and one unspecified rule. Resources will be allocated to the review of test data on 20 chemicals and responding to test standard modifications, both of which are expected to increase substantially during the 1990s. Finally, OPTS will continue to address science policy issues that arise in test rule development which are not chemical specific (i.e., pharmacokinetics, inhalation), but which have broader relevance to the science of testing and decisionmaking in the areas of neurotoxicity, mutagenicity, and immunotoxicity.

The Agency will also review and update published test guidelines, which are an essential part of any test rule. Following evaluation of a candidate list, two new test guidelines will be completed.

1990 Program

In 1990, the Agency is allocating a total of $5,947,700 supported by 65.8 total workyears for this program, of which $3,498,100 is from the Salaries and Expenses appropriation and $2,449,600 is from the Abatement, Control and Compliance appropriation.

In 1990, the ITC testing program will publish initial testing decisions on five chemicals from the 23rd ITC list. The 24th list had no recommendations and designations of chemicals for testing. Work is underway on the 25th and 26th lists. Work is underway on publishing another four testing actions on ITC chemicals, including four final rules requiring testing to begin.

The non-ITC testing program includes completion of a final multi-chemical rule for the Office of Drinking Water (ODW), the first final SARA section 110 test rule to obtain data on chemicals nominated by the Agency for Toxic Substances disease Registry, a second proposed SARA section 110 test rule on chemicals found at Superfund sites, and a proposed endpoint test rule (the first in a series of multi-chemical work rules that require testing or a single endpoint. Work is continuing on a multi-chemical rule to cover specific Toxic Release Inventory (SARA Title III section 313) chemicals. In addition we expect to propose one rule dealing with CFC substitutes and a listing test rule to address new CFC substitutes. Client rules include two proposed and one final. We anticipate an increase in test data receipt, document processing, and handling resulting from previous years testing requirements. Following data analysis and review, these data are routed directly to the Existing Chemical Program. It is anticipated that these data will result in several new starts for the Existing Chemical Review process.

Procedural rules planned for 1990 include a final low volume exemption rule, a final rule expediting test standard modification, and a proposed rule revising the consent order process. The CTP also continues to perform annual reviews and updates of published test guidelines. Following evaluation of a candidate list, two new test guidelines will be completed.

1989 Accomplishments

In 1989, the Agency obligated a total of $8,217,600 supported by 71.1 total workyears for this program, of which $4,655,600 was from the Salaries and Expenses appropriation and $3,562,000 was from the Abatement, Control and Compliance appropriation.

During 1989, a total of 14 ITC testing actions were completed. Initial decisions included one chemical on the 22nd ITC list (21st list was removed from the priority list by the ITC); another 14 testing decisions were published, including 11 final rules and three proposed rules. One new test guideline and one procedural rule were published.

EXISTING CHEMICAL REVIEW

1991 Program Request

The Agency requests a total of $17,936,700 supported by 165.1 total workyears for this program, of which $9,566,000 will be for the Salaries and Expenses appropriation and $8,370,700 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $362,900 for Salaries and Expenses, an increase of $24,800 for Abatement, Control and Compliance and an increase of 6.4 total workyears. The increase in Salaries and Expenses reflects increased personnel costs and the increase in workyears. The increase in Abatement, Control and Compliance will support the creation of a state cooperative agreement program for managing PCBs and additional risk assessments and risk management analyses.

In 1991, EPA will continue to give priority attention to those existing chemicals which appear to have a significant potential to reduce risks to the environment and human health. The identification of these chemicals is achieved through a formal screening process which is being significantly improved in 1990. Chemicals that are candidates for risk management in 1991 include: indoor pollution from new carpeting, brominated flame retardants and chlorofluorocarbon (CFC) substitutes. Two matters under court order, dioxin in paper and follow-up to the dioxin/furan reporting rule, may also require risk management attention in 1991. Implementation of the permit provisions of the asbestos ban and phase out rule and of PCB exemption and permit activities will also continue.

TSCA affords EPA the opportunity to gather information on pollution problems not only for risk management under TSCA, but also for other program areas that lack TSCA's broad information gathering authorities. This program will continue to provide this support in 1991. By 1991, EPA will have gained important knowledge of possible exposure to existing toxic chemicals through the three years of toxic release data collected under section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA). Screening these data will generate candidates for further information gathering, data development and risk assessment. In 1991, six information gathering rules including amendments to the Comprehensive Assessment Information Rule (CAIR) will be published. EPA will continue to review and take action on TSCA section 8(e) and for-your-information (FYI) notices, incorporating toxic release data wherever appropriate. EPA will also continue working with the Agency for Toxic Substances and Disease Registry (ATSDR) on SARA section 110 hazard data gaps and playing a substantial and expanding role in a coordinated national and international cooperative effort in assessing existing chemicals.

The existing chemicals review program will take part in several initiatives as part of the overall Agency pollution prevention effort. These include: a life-cycle approach to reducing lead exposure; the establishment of university-based pollution prevention training centers; participation with the water program in an industrial pollution source reduction and recycling project; and participation with the Office of Research and Development in a volatile organic compounds area-source prevention effort.

One of EPA's goals is to achieve more comprehensive environmental management of chemicals by strengthening regional and state programs. In 1991 we will initiate state cooperative agreements under section 28 of TSCA to provide start-up funding at the state level to strengthen state PCB programs. These cooperative agreements will allow states to establish their own programs to manage PCB manufacturing, processing and disposal, including permitting PCB disposal sites. This start-up funding will help to avoid the many years of delay that states would otherwise experience in initiating PCB programs.

1990 Program

In 1990, the Agency is allocating a total of $17,549,000 supported by 158.7 total workyears for this program, of which $9,203,100 is from the Salaries and Expenses appropriation and $8,345,900 is from the Abatement, Control and Compliance appropriation.

In 1990, TSCA information gathering activities continue to generate a significant amount of data on existing chemicals. The Agency plans to propose or finalize eleven information gathering rules, some of which will provide data collection on multiple chemicals for the Agency and other interested federal agencies. The existing chemical review program also screens and disseminates section 8(e) and voluntary for-your-information notices to the appropriate audience. Work is continuing with ATSDR on development of toxicological profiles under SARA section 110.

In 1990, we are addressing a number of chemicals, including dioxins/furans, PCBs, formaldehyde, lead, CFC substitutes, and chlorinated solvents through risk management actions. EPA is under court order to address the problem of dioxin in paper and dioxin contamination in commercial chemicals. This effort will produce a multi-media risk assessment and a decision on the need for regulation in 1990. Risk assessment on dioxin contamination in commercial chemicals begins in 1990 as EPA receives data under the dioxin/furan reporting rule. EPA will finalize the PCB notification and manifesting rule in 1990, enabling the Agency to better track the disposal of PCB wastes and obtain information on companies that handle and store PCB wastes prior to disposal. A proposed PCB permit revocation rule is underway which will establish criteria and procedures for revocation of PCB permits issued under TSCA. Options selection will be completed by the end of 1990 on aerosol and paint stripping uses of chlorinated solvents and on formaldehyde used in wood products.

Sample collection and storage for the human adipose tissue monitoring program will be continued through 1990 while EPA awaits an evaluation of the program by the National Academy of Sciences. We are also implementing the lead-based paint abatement activities provided for in the EPA/Housing and Urban Development (HUD) Memorandum of Understanding (MOU).

1989 Accomplishments

In 1989, the Agency obligated a total of $11,561,000 supported by 108.8 total workyears for this program, of which $5,608,800 was from the Salaries and Expenses appropriation and $5,952,200 was from the Abatement Control and Compliance appropriation.

In 1989, 16 proposed or final information gathering section 8 or section 5(a) rules were promulgated, including the next iteration of the section 8(a) CAIR. The Agency received 1,152 reports under section 8(a) and section 8(d), and 454 section 8(e) or FYI notices. Preliminary risk assessments were conducted on four chemicals and detailed risk assessments on two chemicals.

Completed risk management actions included a final asbestos ban and phase-out rule banning the manufacture and uses of asbestos products, and options selection on metal cleaning uses of chlorinated solvents.

Other activities during 1989 included options selections for formaldehyde and aerosol and paint stripping uses of chlorinated solvents. Strategies or workplans were prepared for dioxins and furans in bleached paper products and for dioxin/furan contaminants. We issued six permits to dispose of PCBs. The regulatory review of paradichlorobenzene was referred to the Occupational Safety and Health Administration (OSHA) under TSCA section 9(d).

NEW CHEMICAL REVIEW

1991 Program Request

The Agency requests a total of $17,345,200 supported by 168.0 total workyears for this program, of which $9,734,000 will be for the Salaries and Expenses appropriation and $7,611,200 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,559,200 for Salaries and Expenses, an increase of $391,100 for Abatement, Control and Compliance and an increase of 14.0 total workyears. The increase in total workyears and Abatement, Control and Compliance reflects increased costs associated with the biotechnology program. The increase in Salaries and Expenses reflects support for current and increased total workyears, as well as support for implementation of optical disk technology and increases in international travel to participate in conferences to facilitate better implementation of biotechnology regulations with the Organization of Economic Cooperation and Development (OECD) and the European community.

In 1991, we estimate receipt of approximately 3,000 new chemical notices. This is an increase of 250 notices over our current estimate for 1990. About 15% of the submissions are expected to result in voluntary or formal control actions. However, the increase in workload will be largely offset by productivity reforms implemented in 1989 and 1990. The majority of notices will be subject to the user fee rule published in 1988, generating approximately $5,000,000 in revenues for deposit into the General Fund.

Rulemaking activities will focus on the initiation of several amendments to the Premanufacturing Notice (PMN) rule. These amendments are needed to address ambiguities in the current rule resulting from advances in industrial chemistry. In 1991, the implementation of several program improvements will occur, including streamlining the process for making Confidential Business Information (CBI) claims, making section 5 regulation quicker and easier to impose and improving data collection capabilities. Full implementation of the New Chemical Follow-up Rule will enable the New Chemical Program (NCP) to include more new chemicals under Significant New Use Rules (SNURs) in 1991, thereby reducing the time margin during which a SNUR can be preempted by the introduction of a chemical into commerce.

By the end of 1991, the Agency's policy on biotechnology will be fully implemented; i.e., the General Biotechnology Rule and the Closed System Section 5(h)(4) Rule will be promulgated. In addition, we will propose an Inventory Update Rule for biotechnology. Submissions for microbial products are expected to expand to 40. It is anticipated that 50% of these submissions will result in section 5(e) orders. As with any new program, numerous questions of policy and review processes modifications are anticipated. Additional resources will be shifted to this activity as needed.

1990 Program

In 1990, the Agency is allocating a total of $15,394,900 supported by 154.0 total workyears for this program, of which $8,174,800 is from the Salaries and Expenses appropriation and $7,220,100 is from the Abatement, Control and Compliance appropriation.

In 1990, the Agency expects an increase in the number of new chemical submissions (premanufacture notices or PMNs) for a total of 2,750. The majority of notices are subject to the user fee rule, generating approximately $4,000,000 in revenues for deposit into the General Fund. We also expect to receive 20 notices for microbial products. Review procedures for microbial products are more resource intensive than regular submissions and are expected to result in section 5(e) orders on most submissions to require development of additional information.

An optical disk document storage system will be made operational in 1990 through initial purchases of equipment. This state of the art technology provides timely access to documents received and generated by the program through more efficient storage, automated tracking and retrieval. When fully implemented, and the optical disk system will reduce costs and significantly improve productivity over the current microfiche system.

In 1990, EPA is proposing two rules to implement the 1986 policy for microbial products: 1) a General Biotechnology Rule providing for modification of the existing PMN reporting rule for microorganisms, a research and development exemption, significant new uses of microorganisms, and user fees; and, 2) a section 5(h)(4) rule providing the exemption policy for contained and closed systems.

1989 Accomplishments

In 1989, the Agency obligated a total of $20,653,600 supported by 260.6 total workyears for this program, of which $12,786,100 was from the Salaries and Expenses appropriation and $7,867,500 was from the Abatement, Control and Compliance appropriation.

In 1989, the NCP received 1,493 PMNs for new chemicals and conducted 6 biotechnology reviews. The majority of PMNs were subject to the user fee rule, generating $2,500,000 in revenues for deposit into the General Fund. During 1989, significant reforms were initiated to reduce the unit cost of PMN reviews. These reforms included: 1) revisions of low volume, intermediates, and polymer exemption policies; 2) implementation of the User Fee Rule, which occurred in

FY 1988; 3) a streamlined PMN Validation Process; 4) an expanded use of chemical class or category assessments; and 5) a streamlined rule writing procedure.

ASBESTOS IN BUILDINGS

1991 Program Request

The Agency requests a total of $7,683,600 supported by 25.0 total workyears for this program, of which $1,449,000 will be for the Salaries and Expenses appropriation and $6,234,600 will be for the Abatement Control and Compliance appropriation. This represents an increase of $144,400 for Salaries and Expenses, a decrease of $4,436,100 for Abatement, Control and Compliance and no change in total workyears. The increase in Salaries and Expenses is the result of increased personnel costs. The Abatement, Control and Compliance decrease results from a 1990 Congressional add-on for worker training and administrative costs for the asbestos-in-schools loan and grant program that is not carried over into the 1991 request.

The major thrust of the 1991 asbestos program will be to implement the 1990 national asbestos strategy. This strategy lays out the major program activities needed for conducting a coordinated asbestos program for schools and public and commercial buildings.

In 1991, EPA will conduct close-out site evaluations on Asbestos School Hazard Abatement Act (ASHAA) loan and grant projects awarded in 1987 through 1989 and monitor projects awarded in 1990. Technical assistance services will continue to be provided through American Association of Retired Persons (AARP) personnel. We will provide technical assistance and guidance documents to assist schools in complying with Asbestos Hazard Emergency Response Act (AHERA) rules, and offer counsel about AHERA requirements to school officials, particularly those with priority abatement projects that have not been addressed through the ASHAA loan and grant program.

The AHERA schools program will involve a variety of implementation activities, including new training materials for special operations and maintenance activities in schools, a parent/teacher guide to asbestos and a model implementation program for school management plans. Another major activity will be helping states improve their accreditation programs required under AHERA, and other state programs affecting schools.

Funding of cooperative agreements to establish and expand state asbestos accreditation and management programs will expand, with funding increasing to $1,500,000. This funding provides start-up monies to help the states establish comprehensive asbestos abatement programs in public and commercial buildings, expanding beyond such programs established for asbestos abatement in schools.

The joint research program sponsored by the EPA and the Health Effects Institute (HEI) will continue, with a Federal funding level of $2,000,000. This research focuses on indoor airborne asbestos levels, and attracts funding from a variety of private interests, such as current and former asbestos product manufacturers, realtors, building owners and managers, mortgage bankers, labor organizations and environmental groups.

1990 Program

In 1990, the Agency is allocating a total of $11,975,300 supported by 25.0 total workyears for this program, of which $1,304,600 is from the Salaries and Expenses appropriation and $10,670,700 is from the Abatement, Control and Compliance appropriation.

In 1990, in consultation with industry and environmental groups, EPA is developing and implementing a national asbestos strategy to serve as a blueprint for coordinating all aspects of its asbestos in building efforts. Through a grant to the American Association of Retired Persons (AARP), EPA continues to provide technical assistance to states, school districts, building owners, professional and worker groups, and the general public. Headquarters and Regional staff, in coordination with AARP staff, conduct close-out inspections for ASHAA abatement projects funded in previous years, and advise school officials with respect to AHERA requirements. Technical assistance services by Headquarters and Regional staff also continue. EPA is initiating a state cooperative agreement program under the authority of TSCA section 28 to provide start-up funding to assist the states in establishing training and accreditation programs for school asbestos management and abatement professionals, as required by AHERA. Implementation of EPA's 1988 Report to Congress will result in the development in 1990 of a significant program to address the risks posed by asbestos in public buildings. As part of this effort, EPA will develop a new Operations and Maintenance (O&M) Guide for the owners of public and commercial buildings and a model O&M course curriculum. EPA is contributing $2,000,000 towards a research effort conducted by the Health Effects Institute (HEI) to study indoor asbestos exposure levels.

1989 Accomplishments

Accomplishments for this program in 1989 are described under the Asbestos-in-Schools Program Administration and the Asbestos-in-Schools Contractor and Inspector Certification programs.

REGIONAL TOXICS PROGRAM

1991 Program Request

The Agency requests a total of $945,000 supported by 15.1 total workyears for this program, of which $695,000 will be for the Salaries and Expenses appropriation and $250,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $263,500 for Salaries and Expenses, an increase of $250,000 for Abatement, Control and Compliance and an increase of 5.0 total workyears. The increase in Salaries and Expenses reflects the increase in total workyears as well as increased costs for current workyears. The increase in Abatement, Control and Compliance reflects a first-time request to produce educational outreach documents directed at the states, the regulated community and the public on the risks posed by toxic substances and EPA's risk reduction activities. The increase in total workyears will support new and expanding implementation needs in the Toxic Substances program.

Emphasis in 1991 will continue to be on enhancing the capabilities of the Regions and states to address problems with polychlorinated biphenyls (PCBs), asbestos and other toxic pollutants. The national goal for asbestos will continue to be reducing exposure to the public from asbestos in the nation's schools and other public and commercial buildings. The major role for the Regions is in assisting states, localities, and the private sector to assume a greater role in this effort. Extramural funds will provide resources to the Regions to set up workshops, and develop information materials and conduct mass mailings to support outreach and technical assistance activities.

Major goals for PCBs include encouraging state governments to develop in-house expertise on PCB disposal, providing technical assistance to industry for compliance with PCB regulations, supporting implementation of the Notification and Manifesting Rule, increasing state participation in evaluation of site considerations in applications for PCB disposal permits, and facilitating transfer of the PCB clean-up program to the states. Activities in support of these goals include the review and approval of PCB disposal permits for stationary disposal facilities as well as applications for PCB landfills and incinerators, and providing technical and risk assessment support for state and local PCB issues.

1990 Program

In 1990, the Agency is allocating a total of $431,500 supported by 10.1 total workyears, all of which is from the Salaries and Expenses appropriation.

The Regional Program's focus is on providing technical assistance to the states in dealing with PCB problems, and on enhancing state capabilities in developing PCB regulatory programs. The focus of the asbestos program is on schools and other commercial and public buildings, with particular emphasis on strengthening state programs for accreditation of asbestos professionals. In addition, implementation of the Asbestos Ban and Phase-Down Rule requires extensive Regional efforts to explain to industry and the general public the requirements of the rule and its impact.

1989 Accomplishments

No resources were allocated to this program in 1989.

TOXIC SUBSTANCES
OPTS Emergency Planning and Community Right to Know - Title III

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
OPTS - EPCRA						
Salaries & Expenses		$2,903.6	$2,807.4	$4,764.8	$3,871.0	-$893.8
Abatement Control and Compliance		$7,350.9	$11,696.2	$12,237.9	$10,839.7	-$1,398.2
	TOTAL	$10,254.5	$14,503.6	$17,002.7	$14,710.7	-$2,292.0
TOTAL:						
Salaries & Expenses		$2,903.6	$2,807.4	$4,764.8	$3,871.0	-$893.8
Abatement Control and Compliance		$7,350.9	$11,696.2	$12,237.9	$10,839.7	-$1,398.2
OPTS - EPCRA	TOTAL	$10,254.5	$14,503.6	$17,002.7	$14,710.7	-$2,292.0
PERMANENT WORKYEARS						
OPTS - EPCRA		34.8	56.9	80.9	67.8	-13.1
TOTAL PERMANENT WORKYEARS		34.8	56.9	80.9	67.8	-13.1
TOTAL WORKYEARS						
OPTS - EPCRA		37.8	56.9	83.2	67.8	-15.4
TOTAL WORKYEARS		37.8	56.9	83.2	67.8	-15.4

TOXIC SUBSTANCES

OPTS Emergency Planning and Community Right to Know

Budget Request

The Agency requests a total of $14,710,700 supported by 67.8 total workyears for 1991, a decrease of $2,292,000 and 15.4 total workyears from 1990. Of this amount, $3,871,000 will be for the Salaries and Expense appropriation and $10,839,700 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $893,800 in the Salaries and Expenses appropriation and a decrease of $1,398,200 in the Abatement, Control and Compliance appropriation.

1991 Program

The Agency requests a total of $14,710,700 supported by 67.8 total workyears for this program, of which $3,871,000 will be for the Salaries and Expenses appropriation and $10,839,700 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $893,800 for Salaries and Expenses, a decrease of $1,398,200 for Abatement, Control and Compliance, and a decrease of 15.4 total workyears. The decrease in Salaries and Expenses reflects the completion of start up activities related to processing industry data submissions and providing technical guidance to Regional offices. The decrease in the Abatement, Control and Compliance appropriation is due to productivity savings in forms processing.

In 1991, management of the Toxic Release Inventory (TRI) program will focus on more efficient processing of forms, additional assessment of data quality, and improved accessibility and usability of the National Library of Medicine (NLM) data base. Forms processing will be initiated using an optical character reader which is expected to provide considerable savings in future years. Also included is $1,000,000 in state grants authorized under section 28 of TSCA to help address data quality issues. A National Report, including emissions summaries based on the TRI data, will be published and assistance will be provided to the General Accounting Office (GAO) for their report to Congress as required by the statute. Efforts will continue to refine and revise the TRI list of chemicals by rule. The program will also respond to petitions, process trade secret claims, provide state and regional assistance, maintain the Title III Hotline, conduct public and industry outreach activities, and proceed with the fee waiver program. EPA will complete its review of the 3-year sunset provision,and publish a notice to either remove the provision or amend the reporting form and instructions.

The Regional program will continue outreach activities to encourage comprehensive, accurate, and timely reporting of emissions by industry; to provide TRI information to Regional media offices, states and the public; to encourage the use of the data by Regional programs and state agencies, and to provide training concerning access and use of TRI data. Headquarters and Regional staff will closely coordinate efforts to make the data available to the public. Public outreach efforts will also include interpretating/informing the public concerning chemical releases, informing them on ways to access the data, and facilitating communication with other Regional media offices. Regional staff will work to decrease emissions through data analysis, working with state and local agencies to identify facilities of concern, and provide pollution prevention information/technology transfer to the regulated industries. Regional staff will also conduct industry audits to identify opportunities for waste minimization and pollution prevention activities, and provide information to state waste minimization and pollution prevention programs.

1990 Program

In 1990, the Agency is allocating a total of $17,002,700 supported by 83.2 total workyears for this program, of which $4,764,800 is from the Salaries and Expenses appropriation and $12,237,900 is from the Abatement, Control and Compliance appropriation.

In 1990, the Emergency Planning and Community Right to Know program is focused on improving data quality while maintaining the quality of the basic TRI data entry and public availability efforts. Data quality efforts include a multi-level approach to identifying and correcting errors in data submissions, and providing approximately 30 states with start up grants to initiate self-perpetuating state data quality assurance programs. To ensure that access to the TRI data base is not limited by economic need and to encourage initial data access, the fee waiver program provides access to the NLM data base to qualified applicants. The program will propose a peak release amendment to the Toxic Chemical Release Reporting rule and revise the list of chemicals covered. A second National Report is in progress which will compare first and second year data and assess the reasons for changes in release data.

In 1990, the Regional EPCRA program addresses 6 major areas: 1) promoting full reporting by all facilities; 2) supporting the use of the TRI data within the Regional office and in the states; 3) supporting the public's use of the data; 4) continuing industry outreach activities; 5) promoting better quality of data; and 6) managing grants to states.

1989 Program

In 1989, the Agency obligated a total of $10,254,500 supported by 37.8 total workyears for this program, of which $2,903,600 was from the Salaries and Expenses appropriation and $7,350,900 was from the Abatement, Control and Compliance appropriation.

In 1989, the section 313 TRI program was fully implemented for the first time. The major focus was on receiving, storing and processing the toxic release reports and responding to 10 petitions to add or delete chemicals from the reporting list submitted in 1988 and 1989. The data were made available to the public through the National Library of Medicine (NLM) data base. Data quality efforts included site visits and technical audits to determine the reasonableness of industry release estimates. A pilot state grant program was initiated to provide start up grants to support data quality assessment and data management activities at the state level. A National Report was released which provided general interpretation of the TRI data base to the public. A waste reduction data analysis was undertaken to parallel the National Report, comparing section 313 data with Resource Conservation and Recovery Act (RCRA) data. Work on a peak release rule amendment was initiated and a proposed rule to add ten chemicals to the TRI list was published. A fee waiver pilot program began which waived fees for individuals or organizations meeting specified criteria with respect to their use of the NLM TRI data base.

During 1989, the Regions focused on outreach activities, information dissemination, training, compliance activities, and intra-Regional coordination. Efforts focused on facilities subject to reporting requirements for the first time due to decreasing reporting thresholds and supplier notification requirements.

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TOXIC SUBSTANCES
Toxic Substances Enforcement

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Toxic Substances Enforcement						
Salaries & Expenses		$8,004.4	$8,302.9	$8,362.8	$9,386.3	$1,023.5
Abatement Control and Compliance		$1,984.1	$2,743.0	$2,708.1	$2,884.3	$176.2
	TOTAL	$9,988.5	$11,045.9	$11,070.9	$12,270.6	$1,199.7
Toxic Substances Enforcement Grants						
Abatement Control and Compliance		$2,102.1	$3,150.5	$3,110.3	$5,100.0	$1,989.7
	TOTAL	$2,102.1	$3,150.5	$3,110.3	$5,100.0	$1,989.7
TOTAL:						
Salaries & Expenses		$8,004.4	$8,302.9	$8,362.8	$9,386.3	$1,023.5
Abatement Control and Compliance		$4,086.2	$5,893.5	$5,818.4	$7,984.3	$2,165.9
Toxic Substances Enforcement	TOTAL	$12,090.6	$14,196.4	$14,181.2	$17,370.6	$3,189.4
PERMANENT WORKYEARS						
Toxic Substances Enforcement		166.8	183.0	175.5	187.9	12.4
TOTAL PERMANENT WORKYEARS		166.8	183.0	175.5	187.9	12.4
TOTAL WORKYEARS						
Toxic Substances Enforcement		177.9	183.0	182.8	187.9	5.1
TOTAL WORKYEARS		177.9	183.0	182.8	187.9	5.1

TOXIC SUBSTANCES

Toxic Substances Enforcement

Budget Request

The Agency requests a total of $17,370,600 and 187.9 total workyears for 1991, an increase of $3,189,700 and 5.1 total workyears from 1990. Of the request, $9,386,300 will be for the Salaries and Expenses appropriation, and $7,984,300 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,023,500 in the Salaries and Expenses appropriation, and an increase of $2,165,900 in the Abatement, Control and Compliance appropriation.

TOXIC SUBSTANCES ENFORCEMENT

1991 Program Request

The Agency requests a total of $12,270,600 and 187.9 total workyears for this program, of which $9,386,300 will be for the Salaries and Expenses appropriation and $2,884,300 will be for the Abatement, Control, and Compliance appropriation. This represents an increase of $1,023,500 for Salaries and Expenses, an increase of $176,200 for Abatement, Control and Compliance and an increase of 5.1 total workyears. The increase in Salaries and Expenses reflects increased personnel costs as well as the increase in workyears. The increases in total workyears and Abatement, Control and Compliance will support efforts in the regions to strengthen the role of states in regulating toxic substances.

In 1991, Regional personnel will conduct compliance inspections and provide case development specifically targeted at polychlorinated biphenyl (PCB) disposal sites and broker/transporter/storer facilities, while continuing to emphasize asbestos inspections at local education agencies or asbestos contractors under AHERA. The Regions will also conduct some compliance inspections under existing Toxic Substances Control Act rules, although many PCB inspections and most asbestos compliance inspections will be conducted either under contract or through cooperative enforcement agreements with state agencies.

Regional staff will participate in the laboratory data integrity program by conducting good laboratory practices (GLP) inspections at laboratories that perform toxic substances testing. The Regional offices will also conduct inspections in support of Section 5 new chemical regulations and Section 8 reporting rules. It is anticipated that new programs for monitoring compliance with new Section 6 regulations on asbestos and hexavalent chromium will also be initiated.

The increase of 5.1 total workyears will support expanding both the number of states with toxics enforcement programs and the number of state authorities regulating toxic substances. Guidance will be provided to the states on the development of state enforcement infrastructures and legislation and associated tracking of compliance activities and data.

Headquarters manages the national toxic substances enforcement program through guidance to and periodic reviews of Regional programs, including on-site program evaluations. Headquarters also manages a cooperative agreement with the American Association of Retired Persons (AARP) to conduct compliance monitoring inspections under the asbestos-in-schools rule, and exercises overall authority in conducting the Agency's laboratory data integrity program for toxic substances. EPA will continue to conduct full-scale audits of completed test studies submitted to the Agency, and inspections of testing laboratories to verify compliance with good laboratory practices. Both the Regions and Headquarters will also prepare and issue notices of noncompliance and civil administrative complaints and will provide technical assistance and support as necessary to the Office of Enforcement and Compliance Monitoring (OECM) in the prosecution of civil and criminal cases.

Other Headquarters activities include managing and monitoring contracts which provide assistance in priority compliance areas. The priority areas are: sample analysis for PCBs, asbestos, and Section 5 chemicals; inspection support for the section 6 existing chemicals compliance program; case processing support for TSCA subpoena/investigatory reviews and TSCA enforcement reviews, and the development of program guidance and summary materials to assist Regions and states in understanding priorities and carrying out necessary compliance activities.

1990 Program

In 1990, the Agency is allocating a total of $11,070,900 and 182.8 total workyears for this program, of which $8,362,800 is from the Salaries and Expenses appropriation and $2,708,100 is from the Abatement, Control, and Compliance appropriation.

The Regions are conducting inspection programs to determine compliance with TSCA rules. The Regions are also providing assistance to firms that are either seeking to comply voluntarily with TSCA requirements, or that wish to take remedial actions to achieve compliance. The Regional offices are preparing and issuing notices of noncompliance and civil administrative orders, and developing and prosecuting cases when compliance is not achieved. Oversight of the cooperative enforcement agreement program, review and approval of PCB landfills and unique-design stationary PCB incinerators, and PCB site disposal monitoring are also responsibilities of the Regional offices.

In addition to providing overall program guidance and management, Headquarters is managing the laboratory data integrity program and conducting audits of test studies submitted to the Agency under TSCA testing rules. Headquarters staff are managing the AARP cooperative agreement that supports compliance monitoring inspections under the asbestos-in-schools program and managing the various other compliance assistance contracts. Headquarters is also participating in regulation development directed by the Office of Toxic Substances, and preparing enforcement response policies and compliance monitoring strategies for newly developed regulations.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,988,500 supported by 177.9 total workyears for this program, of which $8,004,400 was from the Salaries and Expenses appropriation and $1,984,100 was from the Abatement, Control and Compliance appropriation.

In 1989 the program conducted compliance inspections, data processing, and scientific review of data audits. The Regional offices conducted compliance inspections in support of existing TSCA rules, placing particular emphasis upon PCB and asbestos-in-schools inspections under Section 6. Upon detection of violations, including those originating from state-conducted inspections, the Regional staff developed and prosecuted enforcement cases.

TOXIC SUBSTANCES ENFORCEMENT GRANTS

1991 Program Request

The Agency requests a total of $5,100,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,989,700 to allow an additional 7 states to participate in the PCB and asbestos enforcement cooperative agreement program, to strengthen state Toxic Substances enforcement authorities, and to conduct additional inspections in support of new TSCA rules. Currently, thirty states participate in this program, which emphasizes compliance monitoring of chemical control rules, particularly for PCBs and asbestos. The increase reflects the program's commitment to building state capabilities so that the states can assume more responsibility for the program. An increase in this Federal grant program will produce significantly greater compliance coverage, through an additional 1,800 compliance inspections in critical program areas, including inspections for new hexavalent chromium regulations.

1990 Program

In 1990, the Agency is allocating a total of $3,110,300 for this program, all of which is from the Abatement, Control and Compliance appropriation. These funds support state-conducted toxic substances compliance monitoring programs in 30 states. These state programs focus upon Section 6 chemical control rules, particularly PCB and asbestos compliance monitoring.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,102,100 for this program, all of which was from the Abatement, Control and Compliance appropriation. These funds supported state cooperative enforcement agreement programs in 23 states. These states conducted 1,100 asbestos-in-schools inspections and 800 PCB inspections.

TOXIC SUBSTANCES
OPTS Emergency Planning and Community Right to Know Enforcement

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM					
OPTS - EPCRA Enforcement					
Salaries & Expenses	$511.3	$618.7	$629.7	$580.8	-$48.9
Abatement Control and Compliance	$1,472.7	$2,602.3	$2,562.9	$2,474.9	-$88.0
TOTAL	$1,984.0	$3,221.0	$3,192.6	$3,055.7	-$136.9
TOTAL:					
Salaries & Expenses	$511.3	$618.7	$629.7	$580.8	-$48.9
Abatement Control and Compliance	$1,472.7	$2,602.3	$2,562.9	$2,474.9	-$88.0
OPTS - EPCRA Enforcement TOTAL	$1,984.0	$3,221.0	$3,192.6	$3,055.7	-$136.9
PERMANENT WORKYEARS					
OPTS - EPCRA Enforcement	11.0	11.0	10.9	11.0	.1
TOTAL PERMANENT WORKYEARS	11.0	11.0	10.9	11.0	.1
TOTAL WORKYEARS					
OPTS - EPCRA Enforcement	11.7	11.0	11.0	11.0	0.0
TOTAL WORKYEARS	11.7	11.0	11.0	11.0	0.0

TOXIC SUBSTANCES

OPTS Emergency Planning and Community Right to Know Enforcement

Budget Request

The Agency requests a total of $3,055,700 supported by 11.0 total workyears for 1991. Of this amount, $580,800 will be for the Salaries and Expenses appropriation and $2,474,900 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $48,900 in the Salaries and Expenses appropriation, a decrease of $88,000 in the Abatement, Control, and Compliance appropriation, and no change in total workyears.

OPTS EPCRA ENFORCEMENT

1991 Program Request

The Agency requests a total of $3,055,700 supported by 11.0 total workyears for this program, of which $580,800 will be for the Salaries and Expenses appropriation, and $2,474,900 will be for the Abatement, Control, and Compliance appropriation. This represents a decrease of $48,900 for Salaries and Expenses, a decrease of $88,000 for Abatement, Control, and Compliance, and no change in total workyears. The decreases reflect the completion of pollution prevention projects and other Congressional initiatives that were included in the FY 1990 budget, as well as efficiencies in forms processing.

In 1991, contractor personnel will inspect chemical facilities that use, manufacture or process potentially harmful chemicals to verify that such facilities observe the reporting requirements of the Emergency Planning and Community Right to Know Act. Section 313 of EPCRA requires facilities to submit annual toxic chemical release forms to EPA and the state in which the facility is located. Such forms list amounts of chemicals released into the environment during the preceding year. Since many such facilities are also subject to the reporting requirements of Sections 5, 8 and 13 of the Toxic Substances Control Act (TSCA), the Regions will integrate EPCRA inspections with TSCA recordkeeping and reporting inspections where possible. The Regions will develop appropriate enforcement actions in response to any violations of EPCRA detected during these inspections.

In 1991, Headquarters staff will review and update enforcement response policies, compliance monitoring strategies, procedural manuals and guidance relating to EPCRA. Headquarters personnel will also conduct case development activities and will continue to oversee and provide assistance for Regional case development. Other Headquarters activities will include participating in rulemaking, and providing training to Regional and contractor staff.

Headquarters will also manage a grant with the American Association of Retired Persons (AARP) to conduct compliance inspections and provide paralegal case development under EPCRA. Such contractor support enables the Agency to reach a broader portion of the regulated community without increasing Federal staff. Headquarters will also continue ADP support for an "expert" computer system to target compliance inspections. The computer system will cross-check production and facility profile data to identify facilities that may be noncompliers under EPCRA reporting requirements. Facilities with the highest potential for failure to submit reports will be targeted for inspections. ADP support will also enable Regions to monitor inspections and cases to most efficiently manage the program.

In 1991, the Agency will continue to emphasize the quality and accuracy of data received from the reporting companies by supporting contract inspections for data quality compliance. Also, Headquarters staff will complete the development and in-field application of an automated risk reduction inspection targeting system.

The Agency will undertake a pilot project to incorporate source reduction into settlements with EPCRA violators. Headquarters will identify appropriate guidelines for establishing and measuring documentable emissions reductions in exchange for remitted penalties.

1990 Program

In 1990, the Agency is allocating a total of $3,192,600 supported by 11.0 total workyears for this program, $629,700 of which is from the Salaries and Expenses appropriation and $2,562,900 of which is from the Abatement, Control, and Compliance appropriation.

The Regions are providing compliance assistance to the regulated community, the states, and local authorities. Compliance assistance includes responding to inquiries from individual facilities or the regulated industry as a whole on enforcement requirements, providing training in compliance matters to industry, state or local representatives, and reviewing and implementing enforcement policies, strategies and inspection procedures. The Regions are also conducting compliance inspections, some of which are integrated with other inspections under TSCA Sections 5, 8 and 13. The Regions are also implementing case development as violations are detected.

In 1990, Headquarters personnel are developing enforcement response policies and compliance monitoring strategies to accompany final rules developed by the Office of Toxic Substances under EPCRA, and providing training for regional personnel. Headquarters staff participate in regulation development to assure the enforceability of new rules and to develop rules of practice. Other projects include developing guidance documents, inspection guidelines, procedural manuals and other materials to implement specific program activities. Finally, staff are also conducting case development activities, and providing oversight and assistance in regional case development. Considerable attention to and oversight of case development is critical for a newly enforceable program to provide program-wide consistency among cases and to make precedent-setting determinations in cases of first impression, thereby assuring the integrity of the national compliance monitoring effort.

Headquarters is also providing oversight of the grant to the AARP to conduct inspections under EPCRA.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,984,000 supported by 11.7 total workyears for this program. Total dollars included $511,300 from the Salaries and Expenses appropriation and $1,472,700 from the Abatement, Control, and Compliance appropriation.

During 1989, the Regions provided compliance assistance to the regulated community, the states, and local authorities and conducted compliance inspections. Headquarters personnel developed enforcement response policies and compliance monitoring strategies corresponding to the legislation and rules, and provided training for Regional personnel. Headquarters staff participated in regulation development and issued guidance documents, inspection guidelines, procedural manuals and other materials to implement specific program activities. Regional and AARP personnel combined produced 768 inspections in support of EPCRA TRI reporting provisions in 1989.

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ENERGY

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Salaries & Expenses	$4,503.2	$3,056.5	$3,200.3	$2,170.8	-$1,029.5
Research & Development	$49,975.7	$30,424.3	$28,971.6	$12,085.9	-$16,885.7
TOTAL, Energy	$54,478.9	$33,480.8	$32,171.9	$14,256.7	-$17,915.2
PERMANENT WORKYEARS	62.8	52.4	51.8	30.4	-21.4
TOTAL WORKYEARS	67.2	52.4	51.8	30.4	-21.4
OUTLAYS	$57,314.6	$45,735.0	$45,527.6	$28,502.8	-$17,024.8
AUTHORIZATION LEVELS	Authorization for Energy is under the Environmental Research, Development and Demonstration Act which expired September 30, 1981. Reauthorization is pending.				

ENERGY

OVERVIEW AND STRATEGY

The Energy program provides scientific information necessary to assess (a) environmental impacts from the nation's energy sector (e.g. utilities, industry, and automobiles) and (b) potential controls to mitigate environmental effects. Current Energy program activities are focused on two energy/environmental related issues:

1. causes and effects of acid deposition and
2. assessment of retrofit boiler technology which can reduce air emissions that create acid deposition.

Acid Deposition

The National Acid Precipitation Assessment Program (NAPAP), mandated by the Energy Security Act of 1980, will be completed in 1990. NAPAP's objective to provide policy makers with credible scientific data on the causes and effects of acid deposition should be met. Policy makers will have the 1990 NAPAP Final Assessment Report to Congress to help them assess potential environmental effects from changes in air emissions and appropriate controls to mitigate any adverse environmental effects.

With the issuance of the 1990 NAPAP Assessment, acid rain research will be reduced in 1991. This reduction represents completion of research on: causes of acid deposition; aquatic, terrestrial, and material effects; and potential control technologies.

In 1991, research will continue long-term monitoring, modeling, technology demonstration and emission activities on air emissions related to acid deposition. Research will be focused in three major areas. First, research will estimate air emissions from man-made sources by (a) improving air emission inventories and (b) applying models specific to major source-sectors. Second, research will better understand atmospheric processes through applications of (a) the Regional Acid Deposition Monitoring (RADM) model to assess different control scenarios and (b) refining RADM to describe deposition in urban areas and sensitive receptor regions. Finally, research will establish routine deposition monitoring data on dry atmospheric deposition of chemical species of interest (e.g., SO_2, NO_2, O_3, and particulate sulfate and nitrate).

LIMB Control Technology

The LIMB (Limestone Injection Multistage Burner) research program is developing and evaluating air emission control technology that will remove sulfur oxides (SOx) and nitrogen oxides (NOx) from flue gases of coal-fired boilers. In 1991, LIMB research will continue testing a commercial-scale demonstration of a tangentially-fired LIMB technology in Yorktown, Va. This project is jointly funded by the Federal government and the electrical power generating industry.

Consulting Services

Consulting services are used on an intermittent basis to supplement technical expertise in the Acid Deposition Program.

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ENERGY
Energy Research

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Acid Deposition						
Salaries & Expenses		$3,458.6	$1,984.8	$2,050.3	$864.6	-$1,185.7
Research & Development		$47,573.5	$28,028.6	$26,673.0	$9,692.2	-$16,980.8
	TOTAL	$51,032.1	$30,013.4	$28,723.3	$10,556.8	-$18,166.5
Environmental Engineering & Technology - Energy						
Salaries & Expenses		$1,044.6	$1,071.7	$1,150.0	$1,306.2	$156.2
Research & Development		$2,402.2	$2,395.7	$2,298.6	$2,393.7	$95.1
	TOTAL	$3,446.8	$3,467.4	$3,448.6	$3,699.9	$251.3
TOTAL:						
Salaries & Expenses		$4,503.2	$3,056.5	$3,200.3	$2,170.8	-$1,029.5
Research & Development		$49,975.7	$30,424.3	$28,971.6	$12,085.9	-$16,885.7
Energy Research	TOTAL	$54,478.9	$33,480.8	$32,171.9	$14,256.7	-$17,915.2
PERMANENT WORKYEARS						
Acid Deposition		46.0	33.6	33.4	12.0	-21.4
Environmental Engineering & Technology - Energy		16.8	18.8	18.4	18.4	0.0
TOTAL PERMANENT WORKYEARS		62.8	52.4	51.8	30.4	-21.4
TOTAL WORKYEARS						
Acid Deposition		49.7	33.6	33.4	12.0	-21.4
Environmental Engineering & Technology - Energy		17.5	18.8	18.4	18.4	0.0
TOTAL WORKYEARS		67.2	52.4	51.8	30.4	-21.4

ENERGY

Principal Outputs by Objective

Objective 1: Estimate Emissions from Man-made Sources (Acid Deposition)

1991:
- Development of improved emissions inventory methodologies and enhanced estimation methodologies with improved speciation, temporal and spatial estimates (Monitoring).
- Updating and maintenance of projection models (Monitoring).
- Improve capability for collecting and estimating emissions data at sources, States, and Regions (Engineering).
- Collect fuel use and emissions data for major electric utility sources (Engineering).
- Maintain emission forecasting model to support to the proposed Clean Air Act legislation (Engineering).

1990:
- Enhance air source emissions methodology and procedures (Engineering).
- Report on sensitivity testing of the advanced utility simulation and industrial emissions models (Engineering).
- Provide control technology assessments.

1989:
- Report on and provide a computer tape of the 1985 SO_2, NOx, VOCs, and alkaline material air emissions inventory (Engineering).
- Release updated versions of the advanced utility emissions simulation model and the industrial emissions model (Engineering).

Objective 2: Understand Atmospheric Processes (Acid Deposition)

1991:
- Application of a fully operation Eulerian regional acid deposition modeling system (RADM/EM) to analyze control scenarios (Monitoring).
- Evaluate Regional Acid Deposition Model (RADM) using 1990 surface and aircraft monitoring data (Monitoring).

1990:
- Evaluate the Regional Acid Deposition Model (RADM) using surface and aircraft monitoring data (Monitoring).

1989:
- State-of-science report on RADM with user's guide (Monitoring).

Objective 3: Establish Deposition Monitoring Data Bases (Acid Deposition)

1991:
- Dry deposition data report based on the continued operation of the National Dry Deposition Network (Monitoring).

- Evaluate temporal and spatial trends in Acid Deposition (Monitoring).

1990: o Report on temporal and spatial trends in acid deposition (Monitoring).

1989: o Expand dry deposition monitoring network to 52 sites. First year data provided by 52 sites (Monitoring).

Objective 4: Understand and Quantify Aquatic Effects (Acid Deposition)

1990: o Report on Direct/Delayed Response Program predictions on the Mid-Appalachian region (Monitoring).

- Report on temporal and chemical variability in lakes within the Northeastern U.S. (Monitoring).

1989: o Report on Direct/Delayed Response Program predictions for the Northeast and Southern Blue Ridge province Level III (Monitoring).

- Regional case studies of surface water response characteristics (Monitoring).

Objective 5: Develop and Evaluate LIMB Control Technology (Engineering)

1991: o Continue installation of the tangentially-fired LIMB demonstration (Engineering).

1990: o Final design report on the tangentially-fired LIMB demonstration (Engineering).

- Report on pilot-scale evaluation of the E-SOx process utilizing recycled sorbent (Engineering).

1989: o Report on a commercial-scale demonstration of the wall-fired LIMB technology on controlling SO_2 and NOx air emissions from coal-fired utility boilers (Engineering).

- Report on fundamental studies to enhance the LIMB process to control SO_2 air emissions in retrofit coal-fired applications (Engineering).

ENERGY

Energy Research

Budget Request

The Agency requests a total of $14,256,700 supported by 30.4 total workyears for 1991, a decrease of $17,915,200 and 21.4 total workyears from 1990. Of the request, $2,170,800 will be for the Salaries and Expenses appropriation and $12,085,900 will be for the Research and Development appropriation, a decrease of $1,029,500 and $16,885,700, respectively.

Program Objectives

The goal of multimedia energy research and development program is to provide EPA program and Regional offices; Federal, State, and local governments; and industry with the scientific information necessary to help guide the development and utilization of energy resources in an environmentally acceptable manner. This scientific information is obtained through the Acid Deposition research program which was established in response to the Energy and Security Act of 1980 and a control technology program which is investigating retrofit boiler technologies such as the Limestone Injection Multistage Burner (LIMB) process. Acid deposition research is coordinated through the Interagency Task Force of the National Acid Precipitation Assessment Program (NAPAP), chaired by the EPA Administrator, which is responsible for preparing the 1990 Final NAPAP Assessment Report to Congress. LIMB research is conducted in conjunction with the Department of Energy, which is responsible for the Federal Clean Coal Technology Program. The following objectives define the Agency's energy research and development activities:

Objective 1. Estimate Emissions from Man-made Sources. This research will improve the Agency's understanding of the amount of acidic pollutants formed as a result of man's activities.

Objective 2. Understand Atmospheric Processes. This research addresses the atmospheric processes involved in acid deposition; examines and predicts the transport, chemical transformation, and deposition processes of acidic air masses.

Objective 3. Establish Deposition Monitoring Data Bases. This research will quantify wet and dry acid deposition levels to establish deposition trends, provide vital inputs to effects studies, and provide precise information for statistical analyses on source/receptor relationships.

Objective 4. Understand and Quantify Aquatic Effects. This research will quantify the impacts of acidification on representative aquatic ecosystems.

Objective 5. Develop and Evaluate LIMB Control Technology. This research will develop and evaluate air emission control technologies that will remove sulfur oxides (SOx) and nitrogen oxides (NOx) from flue gases of pulverized coal-fired boilers.

ACID DEPOSITION

1991 Program Request

The Agency requests a total of $10,556,800 supported by 12.0 total workyears for this research, of which $864,600 will be for the Salaries and Expenses appropriation and $9,692,200 will be for the Research and Development appropriation. This represents a decrease of $1,185,700 in the Salaries and Expenses appropriation, $16,980,800 in the Research and Development appropriation, and a decrease 21.4 total workyears. This reduction primarily reflects the completion of the NAPAP Assessment, and the completion of nearly all of the effects research in the acid deposition program.

Estimate Emissions from Man-made Sources. The main components of this research are directed towards support of the President's proposed Clean Air Act Amendments. Research will include the development of an improved methodology for estimating emissions, quality assurance, and maintenance of emission forecast models.

Understand Atmospheric Processes. This program will apply a fully operational Regional Acid Deposition Model/Emissions Model (RADM/EM) modeling system to analyze and evaluate control scenarios, and perform source/receptor analyses in support of the President's Clean Air Act Amendments.

Establish Deposition Monitoring Data Bases. This research will quantify wet and dry acid deposition levels to establish deposition trends.

Understand and Quantify Aquatic Effects. The Aquatic Effects Program will complete work on the Watershed Manipulation Program and publish results of Aquatic research initiated in previous years.

1990 Program

In 1990, the Agency is allocating a total of $28,723,300 supported by 33.4 total workyears for this research, of which $2,050,300 is from the Salaries and Expenses appropriation and $26,673,000 is from the Research and Development appropriation.

These resources will be used to complete the work required in support of the 1990 NAPAP Integrated Assessment and production of SOS/T reports for NAPAP in all program areas. This research will include the completion of a 1984 emissions data base; improving current area source methodologies; application of the completed AUSM model; evaluation of the RADM/EM modeling system; completion of a successful meteorological seasonal aggregation scheme; operation of the wet deposition and dry deposition monitoring network and completion of methods development; and completion of the Episodic Research program, the direct delayed response programs and the atmospheric exposure to forests.

1989 Accomplishments

In 1989, the Agency obligated a total of $51,032,100 supported by 49.7 total workyears for this research, of which $3,458,600 was from the Salaries and Expenses appropriation and $47,573,500 was from the Research and Development appropriation.

The atmospheric processes program carries out a successful first intensive field program involving aircraft research components from the Federal Republic of Germany. The goals of this program, in the collection of a data base for RADM evaluation, were exceeded. A 49 station dry deposition network was installed, and successfully operated. A research grade emissions inventory for the year 1985 was released in final version. Reports were compiled and released on the Direct/Delayed Response Project for the Northeast and Southern Blue Ridge Provence and on the current status of fish communities in the upper Peninsula of Michigan. A synthesis of the response of seedlings to sulfur, nitrogen and associated pollutants was completed. Major progress was made in developing a NAPAP Assessment Plan and in submitting review drafts.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $3,699,900 supported by 18.4 total workyears for this research, of which $1,306,200 will be for the Salaries and Expenses appropriation and $2,393,700 will be for the Research and Development appropriation. This represents increases of $156,200 in Salaries and Expenses and $95,100 in the Research and Development appropriation. The increase reflects increased personnel, support, and research costs.

Develop and evaluate LIMB Control Technology. Research will be conducted in two areas: (1) laboratory, bench, and pilot demonstration of innovative SOx/NOx technologies; and (2) commercial scale demonstration of the tangentially-fired boiler technology. Laboratory development will involve work in improved sorbents, reactivation of sorbents (the ADVACATE process), humidification, precipitators and general support for the LIMB processes. The research program office will begin the initial work on the tangentially-fired boiler LIMB demonstration at Yorktown, VA. The LIMB commercial demonstration program is being funded jointly by the Federal government and industry.

1990 Program

In 1990, the Agency is allocating a total of $3,448,600 and 18.4 total workyears for this research, of which $1,150,000 is from the Salaries and Expenses appropriation and $2,298,600 is from the Research and Development appropriation.

The research program office will complete initial work on support modeling, combustion testing, and preliminary design for the tangentially-fired boiler LIMB demonstration at Yorktown, VA. This large scale demonstration is important because approximately 40% of U.S. utility boilers are tangentially fired. The program will also complete the final report on the wall-fire boiler LIMB demonstration at Edgewater, Ohio. The LIMB commercial-scale demonstrations are jointly funded by the Federal government and the utility industry.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,446,800 supported by 17.5 total workyears for this research, of which $1,044,600 was from the Salaries and Expenses appropriation and $2,402,200 was from the Research and Development appropriation.

In 1989, the Agency completed testing of the wall-fired LIMB technology commercial scale demonstration at Edgewater, Ohio.

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MANAGEMENT AND SUPPORT

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Salaries & Expenses	$348,606.1	$380,281.1	$374.706.0	$435,695.7	$60,989.7
Office of Inspector General		$21,085.4	$20,845.4	$25,027.8	$4,182.4
Abatement Control and Compliance	$12,737.4	$22,061.2	$22,477.4	$16,337.9	-$6,139.5
TOTAL, Management and Support	$361,343.5	$423,427.7	$418,028.8	$477,061.4	$59,032.6
PERMANENT WORKYEARS	2,700.2	3,022.9	2,943.6	3,209.2	265.6
TOTAL WORKYEARS	2,894.2	3,002.9	3,050.7	3,209.2	158.5
OUTLAYS	$359,827.4	$396,256.0	$394,460.5	$456,922.8	$62,462.3
AUTHORIZATION LEVELS	Authorization is by virtue of the Appropriation Act.				

MANAGEMENT AND SUPPORT

OVERVIEW AND STRATEGY

Management and Support provides executive direction and policy oversight for all Agency programs, as well as those administrative and support services that are not assigned to a specific program. Management and Support services include providing quality legal services, promoting technically and economically defensible regulatory and policy alternatives, enhancing the public's perception and understanding of the Agency's goals, managing for environmental results, and pursuing a focused human resources management effort to build a skilled career environmental workforce.

The major components of this medium are Program Management, Agency Management, Regional Management, and Support Costs.

Program Management includes policy development, program development and oversight, and the associated management activities for the Agency's environmental program offices. These include the Offices of Air and Radiation, Water, Enforcement and Compliance Monitoring, International Activities, Pesticides and Toxic Substances, General Counsel, Research and Development, and Solid Waste and Emergency Response.

Agency Management includes Agencywide management functions and policy activities. Agency Management involves the following activities:

Policy direction, through the Executive Offices at Headquarters, consists of the Administrator and Deputy Administrator and their immediate staffs, Regional Operations and State/Local Relations, Executive Support, Administrator's Representation Fund, Civil Rights, Science Advisory Board, Administrative Law Judges, and Small and Disadvantaged Business Utilization, Cooperative Environmental Management, Congressional and Legislative Affairs, and Communications and Public Affairs. The responsibilities of the Executive Offices include improving communications between Headquarters and the Regions, ensuring an effective Congressional liaison, and interpreting the Agency's priorities and programs.

International Activities are performed by the following components: International Cooperation Division, International Issues Division, and Program Operations Division. These divisions will address global environmental issues.

Policy, Planning and Evaluation is organized into the following components: Program Management, the Offices of Policy Analysis, Regulatory Management and Evaluation and Pollution Prevention as well as the Pollution Prevention Program (State grants). Together they will further develop pollution prevention efforts through Agency policy and through working with state programs and other levels of government.

Legal services for litigation in which the Agency is a defendant are provided to Agency programs by the General Counsel in Headquarters and by a Regional Counsel in each Regional office. The Office of General Counsel (OGC) provides legal services and advice to the Administrator and Agency managers. OGC, in cooperation with the Department of Justice, represents the Agency in all legal matters in which the Agency is a defendant. Additionally, OGC reviews proposed actions, decisions, and regulations to assure that they are legally defensible.

Inspector General activities include audits and investigations of Agency activities to promote economy, efficiency and effectiveness, and to prevent and detect fraud, waste, and abuse in EPA programs and operations.

Administration and Resources Management provides management activities in Headquarters, as well as administrative services to all program operations located in Cincinnati, Ohio and Research Triangle Park, North Carolina. The office has several components: Program Management, Financial Management, Comptroller, Organization and Health Services, Contracts and Grants, Facilities and Management Services, Information Systems and Services, and Human Resources Management.

Regional Management includes the centralized management and administrative functions performed in each Regional office. The Regional elements cover the Regional and Deputy Regional Administrators, their immediate staffs, and Regional staff for public affairs, congressional and intergovernmental relations, and civil rights. Other activities include budget development and execution, preparation of Regional operating plans, legal services, program evaluation, financial and personnel management, information management, administration of Freedom of Information Requests, and facilities and property management.

Support Costs include the costs of general support services for all Agency programs. These costs represent:

o Office and building services, such as library services, commercial telephone use, printing and copying, utilities, security, ADP technical support, and custodial and maintenance services for programs located at Headquarters, Research Triangle Park, and Cincinnati;

o Nationwide costs, such as facility rental costs, centralized data processing, U. S. Postal Services charges, Federal Telecommunications System (FTS) charges, unemployment and workmen's compensation, and health and safety costs for all Agency programs in all locations;

o Office and building services for laboratories and field stations operated by the Office of Air and Radiation, Research and Development, and Pesticides and Toxic Substances; and

o Common services in Regional offices, such as supplies and equipment, commercial telephones, printing, facilities operations and maintenance, library services, and mini-computer operations.

Program Priorities

Priorities for the Executive Offices in 1991 will include: continued emphasis on enforcement and compliance efforts for both environmental and civil rights regulations; stronger support from Headquarters and Regions to small, minority, and women's environmental businesses; bringing greater scientific credibility to regulatory decision-making through an emphasis on reviews by the Science Advisory Board; more effective communication between Headquarters and the Regions; and continued clear interpretation of EPA's programs and priorities; increased Agency effectiveness by improving Congressional liaison; continued effective liaison with state and local governments; and stronger outreach programs with the private and public sectors and involve citizen participation.

The Office of General Counsel will continue to provide legal advice and counsel the Agency's top management and media program offices concerning legal interpretation of EPA-administered statutes, other applicable laws, and on such matters as personnel, grants, and contracts. Additionally, the Office of General Counsel will continue to represent the Agency in all major regulatory actions, and ensure that legal errors are avoided and legal positions are presented in the most persuasive manner.

The Office of International Activities will play a primary role in advising the Administrator on international environmental issues and will exercise lead responsibility within EPA for devising strategies to advance the U. S. position. It will continue to manage, direct and evaluate bilateral activities ranging from Canada and Mexico to Eastern Europe, the USSR and developing countries; and will participate actively with multilateral organizations on a host of issues such as global climate change, international development and lending policies, and technology transfer to developing countries.

The Office of Policy, Planning and Evaluation will exercise a leadership role in multi-media pollution prevention by developing Agency policy, supporting state programs, and providing incentives for industry, consumers, and all levels of government to reduce or eliminate residuals before they become "pollutants". It also will have lead responsibility for important aspects of the global climate change program working closely with the Offices of Research and Development, Air and Radiation, and International Activities as well as with other agencies and international organizations. Four-year, media-specific strategic plans will be expanded to include cross-media programs. Cooperative efforts with the Departments of Agriculture, Interior and Energy will focus on pollution prevention measures, protecting ecological values, and energy conservation.

The Office of Inspector General will continue to emphasize internal and management audits to improve the economy, efficiency of EPA programs and provide audit coverage to EPA programs and operations which have received little or no audit coverage in the past. It will provide limited audit coverage for the close-out of wastewater treatment construction grants and expand audit coverage of EPA contracts and other grants. The office will continue its investigation of antitrust activities and other construction-related fraud and will aggressively pursue new initiatives to ferret out fraud in EPA-funded contracts. It will further its efforts in fraud prevention by publicizing its activities to EPA employees, identifying areas sensitive to fraud, and developing new fraud detection tools and methods.

The Office of Administration and Resources Management will continue to assure a strong system of financial internal controls, including work toward integration and improvement of all agency financial management and accounting systems; continue developing a program for better information management planning, particularly between EPA and states; continue improvement in contracts and grants administration; continue to provide a strong health and safety program; pursue a focused human resources management effort to build a skilled career environmental workforce; continue to improve working conditions at the Headquarters facilities; and continue to provide essential administrative and support services to enhance the Agency's ability to fulfill its various mandates.

In the Regional management areas, the Agency will continue its commitment to strengthen Regional environmental programs and maintain strong Regional planning and management efforts. Development of State/EPA data management plans to improve efficiency and reliability of methods for sharing environmental data will receive priority attention.

In Support, the program will continue to provide general support services to Agency programs. This request will also enable the Agency to continue its effort to replace obsolete computers in the Regional offices, as well as cover cost escalations such as rent, telephone, and utility rate increases.

Consulting Services

Management consulting services provide advisory and consulting services in such areas as: management assistance for the design of financial systems, regional management assistance in support of the EPA/State Data Management program and management support of the Agency's public-private partnership initiative. Consulting services also provide scientific data through the following types of analyses; engineering analysis, economic and financial analysis, statistical and technical analyses, technology assessments and environmental/energy implications of global atmospheric changes.

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PROGRAM MANAGEMENT

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Program Management - Air And Radiation						
Salaries & Expenses		$3,101.0	$2,959.2	$2,934.3	$3,021.3	$87.0
	TOTAL	$3,101.0	$2,959.2	$2,934.3	$3,021.3	$87.0
Program Management - Water						
Salaries & Expenses		$3,096.5	$3,109.1	$2,954.0	$3,065.8	$111.8
	TOTAL	$3,096.5	$3,109.1	$2,954.0	$3,065.8	$111.8
Program Management - Enforcement And Compliance Monitoring						
Salaries & Expenses		$528.7	$714.3	$574.5	$759.6	$185.1
	TOTAL	$528.7	$714.3	$574.5	$759.6	$185.1
Program Management - Pesticides and Toxic Substances						
Salaries & Expenses		$2,861.0	$2,962.1	$2,837.1	$3,216.0	$378.9
	TOTAL	$2,861.0	$2,962.1	$2,837.1	$3,216.0	$378.9
Program Management - General Counsel						
Salaries & Expenses		$482.6	$510.3	$503.4	$544.0	$40.6
	TOTAL	$482.6	$510.3	$503.4	$544.0	$40.6
Program Management - Research & Development						
Salaries & Expenses		$5,708.0	$5,377.9	$6,323.5	$7,026.0	$702.5
	TOTAL	$5,708.0	$5,377.9	$6,323.5	$7,026.0	$702.5
Program Management - Solid Waste and Emergency Response						
Salaries & Expenses		$1,785.3	$1,715.0	$1,691.9	$2,169.8	$477.9
	TOTAL	$1,785.3	$1,715.0	$1,691.9	$2,169.8	$477.9
TOTAL:						
Salaries & Expenses		$17,563.1	$17,347.9	$17,818.7	$19,802.5	$1,983.8
Program Management	TOTAL	$17,563.1	$17,347.9	$17,818.7	$19,802.5	$1,983.8

PROGRAM MANAGEMENT

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PERMANENT WORKYEARS					
Program Management - Air And Radiation	41.8	44.6	44.6	44.6	0.0
Program Management - Water	41.3	45.9	45.9	45.9	0.0
Program Management - Enforcement And Compliance Monitoring	8.2	11.9	10.0	11.0	1.0
Program Management - Pesticides and Toxic Substances	37.9	42.6	42.8	42.8	0.0
Program Management - General Counsel	8.5	10.5	10.5	10.5	0.0
Program Management - Research & Development	64.0	62.4	71.8	71.8	0.0
Program Management - Solid Waste and Emergency Response	28.7	28.0	28.0	28.0	0.0
TOTAL PERMANENT WORKYEARS	230.4	245.9	253.6	254.6	1.0
TOTAL WORKYEARS					
Program Management - Air And Radiation	44.1	44.6	44.6	44.6	0.0
Program Management - Water	45.6	45.9	45.9	45.9	0.0
Program Management - Enforcement And Compliance Monitoring	9.1	11.9	10.0	11.0	1.0
Program Management - Pesticides and Toxic Substances	41.0	42.6	42.8	42.8	0.0
Program Management - General Counsel	8.7	10.5	10.5	10.5	0.0
Program Management - Research & Development	65.9	62.4	71.8	71.8	0.0
Program Management - Solid Waste and Emergency Response	30.3	28.0	28.0	28.0	0.0
TOTAL WORKYEARS	244.7	245.9	253.6	254.6	1.0

MANAGEMENT AND SUPPORT

Program Management

Budget Request

The Agency requests a total of $19,802,500 supported by 254.6 workyears for 1991, an increase of $1,983,800 and an increase of 1.0 total workyears from 1990. All of the request is for the Salaries and Expenses appropriation.

AIR AND RADIATION

1991 Program Request

The Agency requests a total of $3,021,300 supported by 44.6 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $87,000 from 1990. Air and radiation program management will focus on implementation of the Indoor Radon Abatement Act, the Clean Air Act, the Atomic Energy Act, the Uranium Mill Tailings Radiation Control Act, and the Superfund Amendments and Reauthorization Act, and on development of major policies and decisions related to these acts.

1990 Program

In 1990 the Agency is allocating a total of $2,934,300 supported by 44.6 total workyears for this program, all of which is from the Salaries and Expenses appropriation. This program provides management support for implementation of the Indoor Radon Abatement Act, the Clean Air Act, the Atomic Energy Act, the Uranium Mill Tailings Radiation Control Act, and the Superfund Amendments and Reauthorization Act. Key activities include: executive management, strategic planning, program planning and analysis, resource management, and budget formulation. The program also provides administrative support to Office of Air and Radiation (OAR) components.

1989 Accomplishments

In 1989 the Agency obligated $3,101,000 for this program supported by 44.1 total workyears, all of which was from the Salaries and Expenses appropriation. The program provided executive management, program planning and analysis, and budget and administrative support to OAR offices.

OFFICE OF WATER

1991 Program Request

The Agency requests a total of $3,065,800 supported by 45.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $111,800 from 1990 and no change in total workyears. The increase in Salaries and Expenses reflects increased personnel and support costs.

The 1991 request supports the development of national policy and implementation of the national regulatory programs for the Water Quality and Drinking Water media. Specific activities include: management of the Office of Water operating guidance and accountability system; development of program plans and budget for implementation of Agency policies; development of legislative initiatives and directions; review of regulations and program policies; tracking of budget execution; and administrative management.

1990 Program

In 1990, the Agency is allocating a total of $2,954,000 supported by 45.9 total workyears, all of which is from the Salaries and Expenses appropriation.

This program is supporting the development of national policy and implementation of the national regulatory programs for the Water Quality and Drinking Water media. Specific activities include: management of the Office of Water operating guidance and accountability system; development of program plans and budget for implementation of Agency policies; development of legislative initiatives and directions; review of regulations and program policies; tracking of budget execution; and administrative management.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,096,500 supported by 45.6 total workyears, all of which was from the Salaries and Expenses appropriation. The program continued to focus in 1989 on the implementation of the Clean Water Act and Safe Drinking Water Act. Activities such as long-range planning and policy analysis, budget development and execution and administrative management were accomplished.

OFFICE OF ENFORCEMENT AND COMPLIANCE MONITORING

Budget Request

The Agency requests a total of $759,600 supported by 11.0 total workyears for 1991 for this program, an increase of $185,100 and an increase of 1.0 total workyears from 1990. All of the request will be for the Salaries and Expenses appropriation.

1991 Program Request

The Agency requests a total of $759,600 supported by 11.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $185,100 and an increase of 1.0 total workyears from 1990. The dollar increase will fund the added workyears and provide for increased personnel and support costs. The additional workyear will be used to improve financial management and computer system support to the Office of Enforcement and Compliance Monitoring (OECM) and the Office of Federal Activities (OFA).

The request will be used for financial, management and administrative services for OECM-Headquarters, OFA, the National Investigations Center (NEIC), Regional legal enforcement, and the Criminal Investigation Program. Emphasis will be placed on improving administrative management functions, information management systems, and ADP support services. Increasing use of automation as a cost-effective tool will be required to effectively manage growth in the program areas and trust funds and greater complexity in financial tracking.

1990 Program

In 1990, the Agency is allocating a total of $574,500 supported by 10.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. Resources in 1990 will provide basic support to OECM, and for the first time OFA due to an Agency reorganization. Basic support includes program planning, personnel management, budget formulation and execution, financial management, information management, and ADP support. Budget formulation support and execution oversight are also provided to NEIC and the Criminal Investigation Program. Workload analyses and distribution of resources are provided for Regional legal enforcement.

1989 Accomplishments

In 1989, the Agency obligated a total of $528,700 supported by 9.1 total workyears, all of which was from the Salaries and Expenses appropriation.

The program provided basic managerial support for program planning, personnel, budget, financial management and administrative support services to the Assistant Administrator of OECM. In addition, budget formulation support was provided to the NEIC, Regional legal enforcement, and the expanding and increasingly visible Criminal Investigation Program.

PESTICIDES AND TOXIC SUBSTANCES

1991 Program Request

The Agency requests a total of $3,216,000 supported by 42.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $378,900 and no change in total workyears from 1990. The increase in Salaries and Expenses results from the transfer of total funding for the activities of the Biotechnology Science Advisory Committee to OPTS, as well as increased emphasis on international activities.

This program will support senior level management of the Pesticides and Toxic Substances program and the Immediate Office of the Assistant Administrator for Pesticides and Toxic Substances, as well as funding the activities of the Biotechnology Science Advisory Committee. Key activities include: efficient and effective general management, strategic planning, and administrative and budget support.

1990 Program

In 1990, the Agency is allocating a total of $2,837,100 supported by 42.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources provide senior level management of the Pesticides and Toxic Substances programs and the Immediate Office of the Assistant Administrator for Pesticides and Toxic Substances with support, as well as partially funding, along with the Office of Research and Development, the activities of the Biotechnology Science Advisory Committee.

1989 Accomplishments

In 1989 the Agency obligated a total of $2,861,000 supported by 41.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation. These resources provided support for the senior level management of the Pesticides and Toxic Substances programs and the Immediate Office of the Assistant Administrator for Pesticides and Toxic Substances and, along with the Office of Research and Development, funded the activities of the Biotechnology Science Advisory Committee.

GENERAL COUNSEL

1991 Program Request

The Agency requires a total of $544,000 supported by 10.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $40,600 and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs.

The request will support planning, budgeting, financial management, management analysis, and administrative services to the Office of General Counsel.

1990 Program

In 1990, the Agency is allocating a total of $503,400 supported by 10.5 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The program provides for planning, budgeting, financial management, management analysis, and administrative services to the Office of General Counsel.

1989 Accomplishments

In 1989, the Agency obligated a total of $482,600 supported by 8.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

Activities focused on providing planning, analytical support, budgeting, financial management, and administrative services to the Office of General Counsel.

RESEARCH AND DEVELOPMENT

1991 Program Request

The Agency requests a total of $7,026,000 supported by 71.8 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $702,500 from 1990. Additional resources will be used to maintain central management control processes to optimize ORD's use of capital equipment, laboratory and office facilities, human resources, and to incorporate improvements of the Agency's new Financial Management Information System.

This program will provide policy guidance, direction and support to ORD's programs to ensure the effective coordination of diverse research programs and administrative management services. These activities include: coordination of the research program planning and budgeting; monitoring of operating year budget execution; coordination of the research activities and administrative support services required at the co-located laboratories in Cincinnati, Ohio and Research Triangle Park, North Carolina; liasion to EPA Regions, OMB, Congress and other Federal agencies; operation and enhancement of ORD's information systems to support research program planning and management accountability and performance of other program management activities such as facilities planning and management, and management and evaluation studies required for ORD.

1990 Program

In 1990, the Agency is allocating a total of $6,323,500 supported by 71.8 total workyears, all of which is from the Salaries and Expenses appropriation. Program Management will continue to coordinate and integrate the entire research and development effort of the Agency, ensuring that the needs identified by program and Regional offices are met.

1989 Accomplishments

The Agency obligated $5,708,000 supported by 65.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. These resources provided for the overall direction, policy guidance, mangement analyses, liaison activities, program planning and budgeting, ORD's information systems, and general administrative support.

SOLID WASTE AND EMERGENCY RESPONSE

1991 Program Request

The Agency requests a total of $2,169,800 supported by 28.0 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $477,900 from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs.

This request will allow the Agency to continue to maintain a complete administrative and programmatic management team within the Office of Solid Waste and Emergency Response (OSWER). This will provide for the full array of policy, regulatory development, and analysis activities; public liaison functions;

resource management; information management; and other support activities for the OSWER programs.

1990 Program

In 1990, the Agency is allocating a total of $1,691,900 supported by 28.0 total workyears, all of which is from the Salaries and Expenses appropriation. This level of resources provides for a wide range of support from the OSWER management team to the Regions, to the program offices, and to the Agency. OSWER program management activities include the review of policy recommendations and proposed regulations; integration of both program and funds control; information management; property management; and administrative support.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,785,300 supported by 30.3 total workyears, all of which was from the Salaries and Expenses appropriation. OSWER program management integrated hazardous waste and Superfund activities; managed the review of policy recommendations and proposed regulations; maintained effective management controls; and provided personnel, financial, administrative, and information management support to the program offices.

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AGENCY MANAGEMENT
Office of the Administrator/Executive Offices

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Immediate Office Of The Administrator						
Salaries & Expenses		$2,527.2	$2,118.1	$2,437.9	$2,884.5	$446.6
Abatement Control and Compliance			$984.6	$972.1		-$972.1
	TOTAL	$2,527.2	$3,102.7	$3,410.0	$2,884.5	-$525.5
Office of Regional Operations and State/Local Relations						
Salaries & Expenses		$943.1	$826.7	$1,086.6	$1,349.3	$262.7
	TOTAL	$943.1	$826.7	$1,086.6	$1,349.3	$262.7
Office Of Executive Support						
Salaries & Expenses		$1,132.7	$969.1	$1,397.5	$1,701.9	$304.4
	TOTAL	$1,132.7	$969.1	$1,397.5	$1,701.9	$304.4
Administrator's Representation Fund						
Salaries & Expenses		$1.1	$5.0	$5.0	$6.0	$1.0
	TOTAL	$1.1	$5.0	$5.0	$6.0	$1.0
Office of Civil Rights						
Salaries & Expenses		$1,518.1	$1,452.6	$1,413.6	$1,649.9	$236.3
	TOTAL	$1,518.1	$1,452.6	$1,413.6	$1,649.9	$236.3
Science Advisory Board						
Salaries & Expenses		$1,540.6	$1,441.4	$1,472.0	$1,735.8	$263.8
	TOTAL	$1,540.6	$1,441.4	$1,472.0	$1,735.8	$263.8
Office of Administrative Law Judges						
Salaries & Expenses		$994.7	$1,105.9	$1,098.2	$1,281.0	$182.8
	TOTAL	$994.7	$1,105.9	$1,098.2	$1,281.0	$182.8
Office of Small & Disadvantaged Business Utilization						
Salaries & Expenses		$609.2	$490.5	$484.0	$638.7	$154.7
	TOTAL	$609.2	$490.5	$484.0	$638.7	$154.7
Office Of Congressional and Legislative Affairs						
Salaries & Expenses		$2,199.5	$2,255.3	$2,208.7	$2,661.1	$452.4
	TOTAL	$2,199.5	$2,255.3	$2,208.7	$2,661.1	$452.4
Office of Communication and Public Affairs						
Salaries & Expenses		$3,526.6	$3,672.6	$4,108.0	$4,792.6	$684.6
	TOTAL	$3,526.6	$3,672.6	$4,108.0	$4,792.6	$684.6

AGENCY MANAGEMENT
Office of the Administrator/Executive Offices

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
TOTAL:					
Salaries & Expenses TOTAL	$14,992.8	$14,337.2	$15,711.5	$18,700.8	$2,989.3
Abatement Control and Compliance TOTAL		$984.6	$972.1		-$972.1
Office of the Administrator/ Executive Offices TOTAL	$14,992.8	$15,321.8	$16,683.6	$18,700.8	$2,017.2
PERMANENT WORKYEARS					
Immediate Office Of The Administrator	33.7	37.8	39.8	43.8	4.0
Office of Regional Operations and State/Local Relations	12.6	11.7	20.6	20.6	0.0
Office Of Executive Support	24.0	24.8	28.8	30.4	1.6
Office of Civil Rights	23.2	24.8	22.8	24.8	2.0
Science Advisory Board	14.9	24.4	14.6	25.4	10.8
Office of Administrative Law Judges	17.8	17.4	16.8	18.4	1.6
Office of Small & Disadvantaged Business Utilization	7.8	6.9	6.9	6.9	0.0
Office Of Congressional and Legislative Affairs	36.8	44.1	49.8	49.8	0.0
Office of Communication and Public Affairs	50.5	56.5	63.5	63.5	0.0
TOTAL PERMANENT WORKYEARS	221.3	248.4	263.6	283.6	20.0

AGENCY MANAGEMENT
Office of the Administrator/Executive Offices

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
TOTAL WORKYEARS					
Immediate Office Of The Administrator	38.2	37.8	42.8	43.8	1.0
Office of Regional Operations and State/Local Relations	13.7	11.7	20.6	20.6	0.0
Office Of Executive Support	25.2	24.8	28.8	30.4	1.6
Office of Civil Rights	24.9	24.8	23.8	24.8	1.0
Science Advisory Board	21.4	24.4	24.4	25.4	1.0
Office of Administrative Law Judges	17.8	17.4	17.4	18.4	1.0
Office of Small & Disadvantaged Business Utilization	7.8	6.9	6.9	6.9	0.0
Office Of Congressional and Legislative Affairs	42.6	44.1	49.8	49.8	0.0
Office of Communication and Public Affairs	55.9	56.5	63.5	63.5	0.0
TOTAL WORKYEARS	247.5	248.4	278.0	283.6	5.6

MANAGEMENT AND SUPPORT

Agency Management

Office of the Administrator/Executive Offices

Budget Request

The Agency requests a total of $18,700,800 supported by 283.6 total workyears in 1991 all of which will be used for the Salaries and Expenses appropriation. This represents an increase of $2,989,300 and 5.6 total workyears from 1990.

IMMEDIATE OFFICE OF THE ADMINISTRATOR

1991 Program Request

The Agency requests a total of $2,884,500 and 43.8 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $446,600 in the Salaries and Expenses appropriation, a decrease of $972,100 in the Abatement, Control and Compliance appropriation, and an increase of 1.0 total workyear from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The decrease in the Abatement, Control, and Compliance appropriation is the result of a 1990 increase for the "Krakow Initiative". The resource increase will allow the Judicial Officer function to accommodate the expanding number of requests sent to them for final decision. Since 1983, this function has seen its caseload increase by 400%. The Office will continue its responsibility for Agency policy and direction, and for setting environmental goals.

1990 Program

In 1990, the Agency is allocating a total of $3,410,000 supported by 42.8 total workyears for this program, of which $2,437,900 is from the Salaries and Expenses appropriation and $972,100 is from the Abatement, Control, and Compliance appropriation. The major priorities in the Immediate Office are: increased emphasis on enforcement and compliance efforts of both environmental and civil rights regulations, continued delegations to State and local governments, on-going support of enhanced science as a basis for decision-making, and use of improved methodologies for managing risk.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,527,200 supported by 38.2 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The major focus of activity was enforcement and compliance efforts to ensure better internal management and to meet the increased number of cases sent to the Judicial Officer function for final decision.

OFFICE OF REGIONAL OPERATIONS AND STATE/LOCAL RELATIONS

1991 Program Request

The Agency requests a total of $1,349,300 supported by 20.6 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $262,700 and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The Office will continue to ensure that the Administrator's policies are effectively communicated to the Regional Administrators; that the Administrator is alerted to potential Regional problems and concerns; that the Administrator is assisted in managing significant Regional issues, and that the basic management needs of the Environmental Services Divisions are addressed. The Office will also continue its implementation of leadership and guidance activities to support community relations efforts throughout the Agency, to maintain Agency liaison with state and local officials while increasing activities to enhance technology transfer capabilities and ensure emphasis on Federalism.

1990 Program

In 1990, the Agency is allocating a total of $1,086,600 and 20.6 total workyears, all of which is from the Salaries and Expenses appropriation. The Office provides a key communications link between the Administrator and the ten Regional offices, plays an active part in Regional budget issues, implements Agency guidance in community relations activities to provide maximum appropriate local involvement in EPA's decisions, and provides guidance for and oversight of the ten Environmental Services Divisions.

1989 Accomplishments

In 1989, the Agency obligated a total of $943.1 and 13.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office ensured that the Administrator's policies were effectively communicated to the Regional Administrators, that the Regions were included in the policy-making and decision-making processes, and that the Administrator was kept informed of Regional concerns and issues. The Office also initiated regular dialogue on environmental issues with local government organizations. In addition, the Office carried out its responsibility as the Headquarters focal point for the Agency's Environmental Services Divisions.

OFFICE OF EXECUTIVE SUPPORT

1991 Program Request

The Agency requests a total of $1,701,900 supported by 30.4 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $304,400 and 1.6 total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The additional resources will be used for the Freedom of Information (FOI) function due to the ever increasing volume of FOIA requests. The number of FOIA requests received has increased by over 360% over the last five years. Responsibilities include routing, logging, and tracking FOIA requests, and a more active role as the Agency-wide FOI Coordinator with responsibilities including

FOI policy development, oversight, and monitoring compliance of FOI Act and Regulations, developing and coordinating Agency FOI policies, and providing guidance and training for the Agency FOI staff. The Office will also continue developing resource determinations in support of various staff office functions including ongoing personnel, financial, budget, and administrative management functions; Staff Office automation support, and processing and monitoring Congressional and executive correspondence.

1990 Program

In 1990, the Agency is allocating a total of $1,397,500 and 28.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The Office is responsible for monitoring resource expenditures, developing the out-year budget for the staff offices, providing centralized personnel management support services, and providing assistance to staff offices with recruitment, staffing, and property control. The Office continues to prepare a yearly report to Congress on the cost to the Agency and to the public of administering the Freedom of Information Act, to provide policy and program oversight on the Freedom of Information Act, and to manage and track executive and Congressional correspondence.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,132,700 and 25.2 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office completed monthly financial and operating plan reports, developed the out-year budget for the staff offices, and conducted workload analyses for Regional Management. The Office also provided assistance and staffing plan development, program management services, and resource and computer planning studies for the Administrator's staff offices. In addition, the Office logged, controlled and monitored all Freedom of Information requests, Congressional correspondence, and correspondence addressed to the Administrator and the Deputy Administrator.

ADMINISTRATOR'S REPRESENTATION FUND

1991 Program Request

The Agency requests a total of $6,000 for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $1,000 from 1990. This increase will provide the Administrator the resources necessary to meet the expanding requirements for official receptions and meetings for visiting dignitaries.

1990 Program

In 1990, the Agency is allocating a total of $5,000 to this program, all of which is from the Salaries and Expenses appropriation. These funds are to cover the expenses of official receptions and other functions.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,100 for this function from the Salaries and Expenses appropriation. This amount covered the expenses of official receptions and other functions.

OFFICE OF CIVIL RIGHTS

1991 Program Request

The Agency requests a total of $1,649,900 supported by 24.8 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $236,300 and 1.0 total workyear from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The additional resources will be used for the External Compliance Program to monitor Title VI compliance for approximately 4.3 billion dollars in Federal grants. That monitoring responsibility involves educating those involved about their rights and responsibilities as well as developing effective and regular review processes. The Office of Civil Rights will also continue to provide technical guidance and direction to the Agency's civil rights efforts; provide policy guidance and implementation of the discrimination complaints processing system; increase policy monitoring and support for Regional Civil Rights Offices, as well as for Headquarters Office of Civil Rights; provide continuous monitoring of affirmative action plan implementation; expand and improve the Equal Employment Opportunity (EEO) counseling program to resolve complaints through informal conciliation; strengthen and improve the special emphasis programs by conducting seminars and workshops for special emphasis employees and Agency managers; increase quantity and quality of EEO reviews and studies; and improve the implementation of the Agency regulations regarding non-discrimination in Federally assisted programs.

1990 Program

The Agency is allocating a total of $1,413,600 and 23.8 total workyears for this Office, all of which is from the Salaries and Expenses appropriation. These resources will enable the Office of Civil Rights (OCR) to continue to provide technical guidance and direction for the Agency's Civil Rights efforts. The Office is strengthening and improving the special emphasis programs by conducting seminars and workshops for special emphasis employees and Agency managers, and is continuing to conduct EEO reviews and studies and provide management support and quality control through on-site program evaluations. OCR continues to implement the Agency's regulations regarding non-discrimination in Federally-assisted programs. We will work to reduce processing time for discrimination complaints and will provide increased management support and quality control through on-site evaluations.

1989 Accomplishments

The Agency obligated a total of $1,518,100 supported by 24.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office of Civil Rights carried out national equal employment opportunity monitoring and enforcement programs; managed the Agency's affirmative action program, special emphasis programs and the discrimination complaints program;

implemented regulations and programs requiring EPA grant recipients to adhere to the civil rights laws and labor standards requirements of applicable Federal statutes; and served as the Agency's focal point for the Historically Black Colleges and Universities program. Specifically, the Office evaluated activities required to carry out the Agency's responsibilities to assure equal opportunity and to prohibit discrimination in employment at EPA; ensured implementation of the Agency's Special Emphasis Programs (Federal Women's, Hispanic Employment and Black Employment Programs); implemented and monitored the Agency's Affirmative Action Plans to remedy under representation in the workforce; and assured compliance by Agency grantees and contractors with provisions of civil rights laws and labor standards requirements of applicable Federal statutes.

SCIENCE ADVISORY BOARD

1991 Program Request

The Agency requests a total of $1,735,800 supported by 25.4 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $263,800 and 1.0 total workyear from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. In 1991, approximately 81 regulatory issues will be identified for the Science Advisory Board (SAB) to examine, an increase of 20 reviews from 1990.

1990 Program

In 1990, the Agency is allocating a total of $1,472,000 supported by 24.4 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The Science Advisory Board is providing expert, independent advice to the Administrator and the Agency on 61 scientific and technical issues before the Agency.

1989 Accomplishments

The Agency obligated a total of $1,540,600 supported by 21.4 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The SAB conducted 59 reviews in 1989. Included among these reviews were issues relating to hazardous air pollutants, toxic substances, drinking water, municipal waste combustion, and radon.

OFFICE OF ADMINISTRATIVE LAW JUDGES (ALJ)

1991 Program Request

The Agency requests a total of $1,281,000 supported by 18.4 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $182,800 and 1.0 workyear from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The additional resources will be used to support the ALJ's expanding caseload including 600 new Toxic Substances Control Act (TSCA) cases related to the Asbestos Hazardous Emergency Response Act. EPA's Office of Enforcement anticipates a high rate of enforcement actions in 1991 as a result of noncompliance by school districts of the asbestos regulations.

1990 Program

In 1990, the Agency is allocating a total of $1,098,200 supported by 17.4 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The ALJ expects to receive approximately 1060 cases from EPA Regional offices in 1990. Of this total, approximately 200 cases are expected to be under the Resource Conservation and Recovery Act (RCRA), 550 cases under the Toxic Substances Control Act (TSCA), and 145 cases under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). In addition, this Office will handle approximately 165 cases originating at Headquarters, including suspensions; cancellations; Sec. 3(c)(1)(D) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); and Clean Air Act cases.

1989 Accomplishments

In 1989, the Agency obligated a total of $994,700 and 17.8 total workyears for this program, all of which was from the Salaries and Expenses appropriation. This Office maintained a docket of 980 cases. Of these cases, 185 were under RCRA; 525 were under TSCA; and 140 cases were under FIFRA.

OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION

1991 Program Request

The Agency requests a total of $638,700 supported by 6.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $154,700 and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The Office will continue to provide technical assistance to both Headquarters and Regional program office personnel to ensure that small, minority and/or women's businesses are receiving a "fair share" of procurement dollars under EPA's Financial Assistance Program. In addition, the ombudsman will respond to approximately 8,000 inquiries from small firms on regulatory matters and will provide advice on the many new regulations that will bring about the desired level of voluntary compliance to several thousand small businesses.

1990 Program

The Agency is allocating a total of $484,000 supported by 6.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation. In 1990 we are stressing the handling of additional "Hotline" calls, implementing a Small Business Ombudsman Strategy, creating business regulatory outreach demonstration projects, and promoting Minority Business Enterprise and Women's Business Enterprise participation in the Agency's financial assistance programs to comply with Executive Order 12432. In addition, the Office will monitor and provide advice on the many new regulations that will bring about the desired level of voluntary compliance by several thousand small businesses.

1989 Accomplishments

In 1989, the Agency obligated a total of $609,200 supported by 7.8 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office coordinated activities with EPA's procurement and financial assistance programs by providing training and technical assistance; provided assistance toward increasing the level of Minority Business Enterprise/ Women's Business Enterprise (MBE/WBE) participation in EPA-assisted programs; provided technical and managerial assistance to Headquarters and Regional staff assigned to socio-economic program activities, and counseled minority and women's businesses in compliance with Executive Order 12432.

OFFICE OF CONGRESSIONAL AND LEGISLATIVE AFFAIRS

1991 Program Request

The Agency requests a total of $2,661,100 supported by 49.8 total workyears for 1991, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $452,400 and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The budget request will enable the Office to provide effective day-to-day liaison with the Congress and will ensure that increasing member and committee requests are handled in a timely manner. The Office will ensure that testimony, draft legislation, and analyses and reports on pending and proposed legislation will be developed and provided to OMB and the Congress in a timely fashion and consistent with Agency and Administration policies.

1990 Program

In 1990, the Agency is allocating a total of $2,208,700 supported by 49.8 total workyears for this Office, all of which is from the Salaries and Expenses appropriation. The Office will continue to provide effective day-to-day liaison with Congress as it examines legislation relating to environmental issues, and will prepare agency reports and recommendations on pending and enacted legislation including draft legislative proposals extending the appropriations required for EPA's major statutory authorities.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,199,500 supported by 42.6 total workyears for this Office, all of which was from the Salaries and Expenses appropriation. The Office of Congressional Liaison was responsible for all day-to-day Congressional contacts, including more than 250 briefings of members and/or staff, involvement in approximately 130 hearings, coordination of numerous meetings, courtesy calls, specific Committee investigative information requests and casework generated by Congress. The Office also developed testimony and related material for 109 legislative hearings, reviewed and responded to 145 bills referred to the Agency from OMB and Congressional committees, 120 draft legislative reports proposed by other agencies, and 172 statements or testimony of other agencies.

OFFICE OF COMMUNICATIONS AND PUBLIC AFFAIRS

1991 Program Request

The Agency requests a total of $4,792,600 supported by 63.5 total workyears for 1991, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $684,600 and no change in total workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. In 1991, the Office of Communications and Public Affairs will continue to inform, educate, and involve the public on the issues before the Agency and to promote understanding of the Agency's mission and the Administrator's goals and objectives.

1990 Program

In 1990, the Agency is allocating a total of $4,108,000 supported by 63.5 total workyears for this Office, all of which is for the Salaries and Expenses appropriation. In addition to working with the news media and providing informational materials for the general public, the Office is emphasizing: (1) improving coordination within the Agency of communication activities related to major Agency actions, and (2) strengthening long-range planning of public information activities in coordination with major EPA program offices and the Regional offices.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,526,600 supported by 55.9 total workyears for this Office, all of which was from the Salaries and Expenses appropriation. In addition to the general activities of informing the news media and providing information material to the public, the Office focused on Agency priority issues of concern to the public and provided communications support for major EPA initiatives.

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AGENCY MANAGEMENT
Office of the Inspector General

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Office of Inspector General					
Salaries & Expenses	$15,885.8	0.0	0.0	0.0	0.0
Office of Inspector General	0.0	$21,085.4	$20,845.4	$22,585.8	$1,740.4
TOTAL	$15,885.8	$21,085.4	$20,845.4	$22,585.8	$1,740.4
TOTAL:					
Salaries & Expenses	$15,885.8	0.0	0.0	0.0	0.0
Office of Inspector General	0.0	$21,085.4	$20,845.4	$22,585.8	$1,740.4
TOTAL	$15,885.8	$21,085.4	$20,845.4	$22,585.8	$1,740.4
PERMANENT WORKYEARS					
Office of Inspector General	219.1	242.8	242.8	262.1	19.3
TOTAL PERMANENT WORKYEARS	219.1	242.8	242.8	262.1	19.3
TOTAL WORKYEARS					
Office of Inspector General	221.1	242.8	242.8	262.1	19.3
TOTAL WORKYEARS	221.1	242.8	242.8	262.1	19.3

MANAGEMENT AND SUPPORT

Agency Management

Office of the Inspector General

Budget Request

The Agency requests a total of $22,585,800 supported by 262.1 total workyears for 1991, an increase of $1,740,400 and 19.3 total workyears from 1990. All of this request will be for the Inspector General appropriation. This does not include an additional $3,230,000 in support costs for the entire Office of Inspector General appropriation that are displayed in the Office of Administration and Resource Management support accounts.

Program Description

This office is responsible for conducting, supervising, and coordinating audits and investigations relating to EPA programs and operations; promoting economy, efficiency, and effectiveness in the administration of EPA programs; preventing and detecting fraud and abuse in EPA programs and operations; keeping the Administrator and Congress advised of problem areas and related corrective action; and reviewing EPA regulations and legislation.

OFFICE OF INSPECTOR GENERAL

1991 Program Request

The Agency requests a total of $22,585,800 supported by 262.1 total workyears, all of which will be for the Management portion of the Office of Inspector General appropriation. This represents an increase of $1,740,400 and 19.3 total workyears from 1990. We will use these resources to (1) provide effective management of the contract audit program, including development and maintenance of in-house contract audit expertise, and conduct needed audits of highly sensitive contract issues; (2) continue conducting audits to close out construction grants;(3) expand the OIG's capability to conduct audits of the Agency's growing and complex, yet vulnerable computer systems, used to make critical environmental decisions; (4) obtain severely needed ADP and law enforcement equipment, (5) increase investigative efforts to reduce the risk of fraud and abuse in Agency procurement, construction grant, and other programs; and (6) support the Agency personnel security program and new legislative requirements of the Inspector General Act Amendments.

The resources requested will be used by the Office of Inspector General (OIG) to continue conducting performance (internal and management) audits to improve the economy, efficiency, and effectiveness of EPA programs and to provide and expand audit coverage to EPA programs and operations for ensuring that maximum pollution prevention is achieved with existing Agency program resources. The OIG will emphasize reviewing programs aimed at achieving environmental results and strong enforcement of environmental laws with an emphasis on (1) indoor and ambient air quality, (2) pesticides and toxics substances, (3) hazardous waste disposal, (4) wetlands, and (5) water quality (surface, groundwater, and drinking water). The OIG will continue its program of external audits of grants and contracts which have historically recovered over $23 in costs for each audit dollar spent and conduct audits of the State Revolving Funds.

The OIG will also increase high-impact investigations of antitrust activities and other construction-related fraud and will aggressively pursue new initiatives, including the use of substandard materials by architectural and engineering firms and conspiracies to defraud by contract laboratories. By focusing our fraud efforts in vulnerable areas and by taking more proactive initiatives, the OIG expects to obtain greater results, including more indictments, convictions, and monetary recoveries. The OIG will continue its efforts in fraud prevention by publicizing OIG activities to EPA employees, identifying areas sensitive to fraud, and developing new fraud detection tools and methods.

1990 Program

In 1990, the Agency is allocating a total of $20,845,400 supported by 242.8 total workyears, all of which is from the Salaries and Expense appropriation. The OIG is continuing to perform performance based audits needed to help improve the economy, efficiency, and effectiveness of the Agency's overall program operations. Primary emphasis is on reviewing programs or areas in which insufficient audit resources have been devoted. For example, this would include reviewing programs aimed at achieving environmental results and ensuring strong enforcement including air and water quality, hazardous waste disposal, pesticides and toxics, and asbestos grants and loans. Such reviews assist Agency managers to identify and correct major systemic problems which in turn strengthen environmental programs. These reviews help the Agency meet its mission while ensuring that limited resources are used more efficiently and effectively.

The OIG investigative resources are devoted to conducting criminal investigations relating to EPA programs and operations. Major investigations cover bid rigging and other fraud in EPA-funded construction activities; procurement fraud; false claims; fraud and misconduct concerning EPA employees; and administrative investigations of improprieties involving EPA programs and personnel. New initiatives have been aggressively started to identify fraud in the contract laboratory program and use of substandard materials in construction projects. Efforts are continuing to encourage the use of the OIG hotline to uncover instances of suspected fraud, waste, and mismanagement. Under the fraud prevention program, the OIG is providing technical and audit assistance to the Agency assessing the adequacy of internal controls as required by the Federal Managers' Financial Integrity Act of 1982.

1989 Accomplishments

In 1989, the Agency obligated a total of $15,885,800 supported by 221.1 total workyears, all of which was from the Salaries and Expenses appropriation. The Office of Inspector General issued 1,920 audit reports with questioned costs and recommended efficiencies of $610,200,000. Overall, $106,400,000 of costs questioned and recommended efficiencies were sustained by Agency management. During the year, the Agency obtained $30,000,000 of actual cash recoveries as a result of audit efforts. An expanded performance audit program was implemented and about 25 percent of the OIG audit resources were devoted to examining many critical areas needing audit. Performance audits provided recommendations for improving the effectiveness, efficiency, and results of EPA program operations. Investigative activities focusing on major civil and criminal violations have resulted in the recovery of $5,433,251 in judgments, fines and restitution.

Key improvements resulting from OIG audits included: (1) strengthening inspections and enforcement of hazardous air pollutants standards for asbestos; (2) strengthening of controls over the permitting of hazardous waste sites; (3) developing and enacting an enforcement strategy over the export and import of hazardous wastes, and (4) initiating aggressive action plan to identify and enforce closing of hazardous waste sites. The OIG opened 262 new investigations and closed 274 investigations, obtaining 74 indictments or convictions. Significant results were achieved in investigations of hazardous waste cleanup fraud, and bribery in the inspection of asbestos removal, false statements in the construction grant, contract services, and other programs, and the submission of fraudulent documentation involving emissions testing of foreign vehicles. The OIG also initiated a fraud prevention and detection awareness program for EPA managers to encourage and improve their recognition and reporting of possible fraud and abuse.

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AGENCY MANAGEMENT
Office of the General Counsel

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Office Of General Counsel						
Salaries & Expenses		$7,416.7	$7,529.6	$7,636.7	$10,197.0	$2,560.3
	TOTAL	$7,416.7	$7,529.6	$7,636.7	$10,197.0	$2,560.3
TOTAL:						
Salaries & Expenses		$7,416.7	$7,529.6	$7,636.7	$10,197.0	$2,560.3
Office Of General Counsel	TOTAL	$7,416.7	$7,529.6	$7,636.7	$10,197.0	$2,560.3
PERMANENT WORKYEARS						
Office Of General Counsel		110.6	126.7	130.6	145.6	15.0
TOTAL PERMANEMENT WORKYEARS		110.6	126.7	130.6	145.6	15.0
TOTAL WORKYEARS						
Office Of General Counsel		121.1	126.7	130.6	145.6	15.0
TOTAL WORKYEARS		121.1	126.7	130.6	145.6	15.0

MANAGEMENT AND SUPPORT

Agency Management

Office of General Counsel

Budget Request

The Agency requests a total of $10,197,100 supported by 145.6 total workyears for 1991, an increase of $2,560,300 from 1990. All of the requested funds will be for the Salaries and Expenses appropriation. This represents an increase of 15 total workyears from the Salaries and Expenses appropriation and no change in total workyears from the Reregistration and Expedited Processing Revolving Fund.

GENERAL COUNSEL

1991 Program Request

The Agency requests a total of $10,197,100 supported by 145.6 workyears for this program. All of the requested funds will be for the Salaries and Expenses appropriation. Total workyears will include 144.6 from the Salaries and Expenses appropriation and 1.0 will be from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $2,560,300 in the Salaries and Expenses appropriation, an increase of 15.0 total workyears from the Salaries and Expenses appropriation and no change in total Reregistration and Expedited Processing Revolving Fund workyears from 1990. The increase in Salaries and Expenses will provide for additional attorney staff and for increased costs of office support and personnel.

The Office of General Counsel (OGC) will provide legal advice and counsel to Agency management and media program offices concerning legal interpretation of EPA administered statutes, other applicable laws, regulations and administrative areas a such as personnel, grants, contracts, and access by the public to EPA held information. The OGC will handle litigation in which EPA is a defendant. Legal support and review will be provided for all major regulatory actions, policy documents and guidelines to insure that legal error is avoided. OGC's requested increase of 15.0 total workyears will be devoted to a broad range of areas including support to the Clean Air Act; Clean Water Act; Resource Conservation and Recovery Act; support to the Inspector General's Office; legal support on American Indian and international matters, and to the Agency's procurement program. This increase will build additional capacity within the OGC to fulfill its mission of providing legal services to all organizational elements of the Agency for all Agency programs and activities. OGC will be better able, as legal advisor, to assist in the formulation and administration of the Agency's policies and programs. Six total workyears will be devoted from the increase to the implementation of anticipated major amendments to the Clean Air Act, particularly for ozone and carbon monoxide attainment, mobile source rulemakings, hazardous air pollutants, permit issues, and acid deposition controls.

OGC will support reregistration activities related to the 1988 FIFRA Amendments, particularly to Phase IV and Phase V of the reregistration process to support the Agency in any litigation against it and to assist in making precedential legal and policy decisions on the first pesticides that go through the process.

1990 Program

In 1990, the Agency is allocating a total of $7,636,700 supported by 130.6 total workyears for this program. All funds are from the Salaries and Expenses appropriation. Total workyears include 129.6 from the Salaries and Expenses appropriation and 1.0 from the Reregistration and Expedited Processing Revolving Fund. The 1990 program provides continued support to Agency program priorities through legal advice and assistance, handling defensive litigation, review of Agency rulemaking actions, and participating in selected administrative proceedings.

OGC will support reregistration activities related to the 1988 FIFRA Amendments through assistance to the establishment of the basic regulatory framework for reregistration, and handling litigation which may result from new requirements such as health and environmental testing under Part 158 and Data Call-In requests that will be enforced by suspension orders.

1989 Accomplishments

In 1989, the Agency obligated a total of $7,416,700 supported by 121.1 total workyears. All funds were from the Salaries and Expenses appropriation. Total workyears included 120.8 from the Salaries and Expenses appropriation, and 0.3 from the Reregistration and Expedited Processing Revolving Fund. In 1989, the OGC supported priorities by providing legal advice and support to Agency managers and by defending the Agency in litigation filed against it. OGC also reviewed regulatory actions to ensure legal defensibility and provided advice on other actions, such as grants, contracts, and personnel matters.

OGC supported reregistration activities related to the 1988 FIFRA Amendments by assisting in developing the broad structure of the reregistration program, including the initial fee collection system, the data requirements, and the lists of active ingredients for reregistration.

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AGENCY MANAGEMENT
Office of International Activities

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
				(DOLLARS IN THOUSANDS)		
PROGRAM						
Office of International Activities						
Salaries & Expenses		$1,732.6	$1,966.9	$4,160.5	$3,814.5	-$346.0
Abatement Control and Compliance		$245.6	$814.1	$1,313.8	$949.9	-$363.9
	TOTAL	$1,978.2	$2,781.0	$5,474.3	$4,764.4	-$709.9
TOTAL:						
Salaries & Expenses		$1,732.6	$1,966.9	$4,160.5	$3,814.5	-$346.0
Abatement Control and Compliance		$245.6	$814.1	$1,313.8	$949.9	-$363.9
Office of Interneional Activities	TOTAL	$1,978.2	$2,781.0	$5,474.3	$4,764.4	-$709.9
PERMANENT WORKYEARS						
Office of International Activities		23.5	32.0	50.6	52.0	1.4
TOTAL PERMANENT WORKYEARS		23.5	32.0	50.6	52.0	1.4
TOTAL WORKYEARS						
Office of International Activities		26.6	32.0	53.0	52.0	-1.0
TOTAL WORKYEARS		26.6	32.0	53.0	52.0	-1.0

MANAGEMENT AND SUPPORT

Agency Management

Office of International Activities

Budget Request

The Agency requests a total of $4,764,400 supported by 52.0 total workyears for 1991. This represents a decrease of $709,700 and a decrease of 1.0 total workyears from 1990. Of this request, $3,814,500 will be for the Salaries and Expenses appropriation and $949,900 will be for the Abatement, Control, and Compliance appropriation. This represents a decrease of $346,000 in the Salaries and Expenses and a decrease of $363,900 in the Abatement, Control and Compliance appropriation.

OFFICE OF INTERNATIONAL ACTIVITIES

1991 Program Request

The Agency requests a total of $4,764,400 supported by 52.0 total workyears for this program, of which $3,814,500 will be for the Salaries and Expenses appropriation and $949,900 will be for the Abatement, Control and Compliance appropriation. This represents a decrease of $346,000 in the Salaries and Expenses appropriation, a decrease of $363,900 in the Abatement, Control and Compliance appropriation and a decrease of 1.0 total workyears. The decrease in the Salaries and Expenses appropriation reflects productivity improvements; the decrease in the Abatement, Control and Compliance appropriation reflects a shift in emphasis from contracting to policy analysis; and the decrease in workyears reflects a transfer to support an increased legal workload.

The Office of International Activities will develop the Agency's international strategy by managing, evaluating and strengthening bilateral agreements with Canada on acid rain, hazardous waste and Great Lakes water quality; with Mexico on Mexico City air pollution; and with the USSR on global warming. OIA's activities with Eastern Europe will focus on implementing the President's East European Environmental initiative, with particular emphasis on overseeing the newly established environmental center in Budapest and with expanded cooperative environmental activities in Poland (Krakow), Czechoslovakia and Yugoslavia. In 1991, the Office's activities will also focus on active and close participation with multilateral lending institutions on environmental issues; with the United Nations General Assembly (UNGA) on the development of environmental resolutions and the planning of the UN 1992 Conference on Environment and Development; and with the United Nations Environment Programme (UNEP) on ozone shield protection and global climate change. In addition, the Office will play a leadership role in implementing the recommendations of the International Environmental Technology Transfer Advisory Board (IETTAB), established at the request of the President to identify the needs and evaluate the barriers to the transfer of technology to developing countries and what were recently centrally planned economies.

1990 Program

In 1990, the Agency is allocating a total of $5,474,300 supported by 53.0 total workyears for this program, of which $4,160,500 is from the Salaries and Expenses appropriation and $1,313,800 is from the Abatement, Control and Compliance appropriation. The newly elevated and expanded Office is positioned to keep pace with heightened priorities in the international environmental arena. It is providing an added dimension to the management of U.S. environmental interests through a major evaluation of bilateral programs, through active participation in multilateral fora -such as the Organization for Economic Cooperation and Development, the World Bank and UNEP, and through direct impact on the deliberations of the newly established International Environmental Technology Transfer Advisory Board. In addition, the Office will manage the 12th US-USSR Joint Committee Meeting and the Economic Commission for Europe's (ECE) Workshop on the "Economics of Sustainable Development".

1989 Accomplishments

The Agency obligated a total of $1,978,200 and 26.6 total workyears for this program, of which $1,732,600 was from the Salaries and Expenses appropriation and $245,600 was from the Abatement, Control and Compliance appropriation. Border air and water pollution problems continued to dominate the agenda of the Office, focussing on Mexico and Canada. 1989 also saw the first stirrings of the President's East European Environmental Initiative. In addition, hazardous waste issues continued to play a role.

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AGENCY MANAGEMENT
Office of Federal Activities

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Office of Federal Activities						
Salaries & Expenses		$2,107.1	$2,164.9	$2,266.9	$2,457.6	$190.7
	TOTAL	$2,107.1	$2,164.9	$2,266.9	$2,457.6	$190.7
TOTAL:						
Salaries & Expenses		$2,107.1	$2,164.9	$2,266.9	$2,457.6	$190.7
Office of Federal Activities	TOTAL	$2,107.1	$2,164.9	$2,266.9	$2,457.6	$190.7
PERMANENT WORKYEARS						
Office of Federal Activities		30.6	33.9	35.2	35.2	0.0
TOTAL PERMANENT WORKYEARS		30.6	33.9	35.2	35.2	0.0
TOTAL WORKYEARS						
Office of Federal Activities		33.7	33.9	35.2	35.2	0.0
TOTAL WORKYEARS		33.7	33.9	35.2	35.2	0.0

MANAGEMENT AND SUPPORT

Agency Management

Office of Federal Activities

Budget Request

The Agency requests a total of $2,457,600 supported by 35.2 total workyears for 1991. The entire request will be for the Salaries and Expenses appropriation. This represents an increase of $190,700 and no change in total workyears from 1990. The increase in Salaries and Expenses is provided for general administrative expenses.

1991 Program Request

The Agency requests a total of $2,457,600 and 35.2 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $190,700 and no change in total workyears. The increase in the Salaries and Expenses appropriation will provide additional resources to conduct environmental reviews of projects funded by multilateral development banks. In addition, these resources will assist the development of environmental impact assessment procedures by international organizations and other countries.

In 1991, the Office of Federal Activities will: review major Federal actions significantly affecting the environment, required by Section 309 of the Clean Air Act and National Environmental Policy Act (NEPA); identify potential problems and work to ensure incorporation of needed environmental improvements in these reviews; work with other Federal agencies to assure that their facilities comply with environmental regulations and standards; strengthen the Pollution Abatement Project Review Process; work to ensure that EPA programs and activities comply with environmental review requirements (including NEPA) and related environmental laws; develop policy and coordinate EPA programs for assisting Indian tribes in developing environmental programs; oversee environmental policy MOUs with other Federal agencies; manage the official filing activity for all Federal Environmental Impact Statements in accordance with an MOA with the Council of Environmental Quality; and assist in EPA participation in the international development of environmental impact assessment procedures.

1990 Program

In 1990, the Agency is allocating a total of $2,266,900 and 35.2 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

The Office of Federal Activities will continue to: promote improved compliance by Federal facilities with environmental regulations, particularly those governing handling and disposal of hazardous and toxic wastes; assure that proposed major Federal projects are designed to prevent significant environmental impacts; ensure that EPA programs operate in conformance with NEPA and related environmental laws and executive policy; assist in development of environmental impact assessment procedures by international organizations and other countries;

coordinate implementation of the Agency's Indian Policy; and strengthen overall communication and liaison with other Federal agencies.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,107,100 and 33.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The Office focused its activity on: ensuring that EPA programs operate in conformance with NEPA and other cross-cutting Federal environmental statutes; directing activities related to compliance of Federal installations with environmental regulations; reviewing other Federal actions for potential environmental impact; analyzing EPA policies associated with other Federal agencies; overseeing the implementation of EPA Indian Policy; providing limited support for international environmental impact activities; and operating the Federal EIS filing effort.

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AGENCY MANAGEMENT
Office of Policy, Planning and Evaluation

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Program Management - Policy, Planning And Evaluation						
Salaries & Expenses		$913.7	$879.9	$884.6	$1,157.7	$273.1
	TOTAL	$913.7	$879.9	$884.6	$1,157.7	$273.1
Integrated Environmental Management Program						
Salaries & Expenses		$2,748.6	$2,805.2	$2,746.8		-$2,746.8
	TOTAL	$2,748.6	$2,805.2	$2,746.8		-$2,746.8
Office of Policy Analysis						
Salaries & Expenses		$8,001.0	$9,315.2	$8,872.9	$10,600.3	$1,727.4
Abatement Control and Compliance		$8,936.7	$10,522.8	$10,377.6	$6,924.1	-$3,453.5
	TOTAL	$16,937.7	$19,838.0	$19,250.5	$17,524.4	-$1,726.1
Office of Regulatory Management and Evaluation						
Salaries & Expenses		$5,215.7	$5,407.9	$5,334.9	$7,507.7	$2,172.8
Abatement Control and Compliance					$515.0	$515.0
	TOTAL	$5,215.7	$5,407.9	$5,334.9	$8,022.7	$2,687.8
Office of Pollution Prevention						
Salaries & Expenses		$2,788.3	$2,978.0	$3,096.6	$6,445.0	$3,348.4
Abatement Control and Compliance					$1,500.0	$1,500.0
	TOTAL	$2,788.3	$2,978.0	$3,096.6	$7,945.0	$4,848.4
Pollution Prevention Program						
Salaries & Expenses		$808.8	$1,101.4	$1,110.8		-$1,110.8
Abatement Control and Compliance		$2,056.9	$8,306.9	$8,200.8	$3,000.0	-$5,200.8
	TOTAL	$2,865.7	$9,408.3	$9,311.6	$3,000.0	-$6,311.6
TOTAL:						
Salaries & Expenses	TOTAL	$20,476.1	$22,487.6	$22,046.6	$25,710.7	$3,664.1
Abatement Control and Compliance	TOTAL	$10,993.6	$18,829.7	$18,578.4	$11,939.1	-$6,639.3
Office of Policy, Planning, & Evaluation	TOTAL	$31,469.7	$41,317.3	$40,625.0	$37,649.8	-$2,975.2

AGENCY MANAGEMENT
Office of Policy, Planning and Evaluation

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PERMANENT WORKYEARS					
Program Management - Policy, Planning And Evaluation	12.0	14.8	13.9	17.0	3.1
Integrated Environmental Management Program	12.6	18.9	16.0	0.0	-16.0
Office of Policy Analysis	55.1	67.3	55.8	93.2	37.4
Office of Regulatory Management and Evaluation	59.5	64.5	63.0	74.4	11.4
Office of Pollution Prevention	45.3	51.9	52.0	72.2	20.2
Pollution Prevention Program	8.3	18.7	9.7	0.0	-9.7
TOTAL PERMANENT WORKYEARS	192.8	236.1	210.4	256.8	46.4
TOTAL WORKYEARS					
Program Management - Policy, Planning And Evaluation	13.7	14.8	14.8	17.0	2.2
Integrated Environmental Management Program	17.3	18.9	18.9	0.0	-18.9
Office of Policy Analysis	60.0	67.3	61.1	93.2	32.1
Office of Regulatory Management and Evaluation	63.6	64.5	64.5	74.4	9.9
Office of Pollution Prevention	48.4	51.9	53.4	72.2	18.8
Pollution Prevention Program	8.8	18.7	9.7	0.0	-9.7
TOTAL WORKYEARS	211.8	236.1	222.4	256.8	34.4

MANAGEMENT AND SUPPORT

Agency Management

Office of Policy, Planning and Evaluation

Budget Request

The Agency requests a total of $37,649,800 supported by 256.8 total workyears for 1991, a decrease of $2,974,900 and an increase of 34.4 total workyears from 1990. Of the request $25,710,700 will be for the Salaries and Expenses appropriation and $11,939,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,664,100 in the Salaries and Expenses appropriation, and a decrease of $6,639,000 in the Abatement, Control and Compliance appropriation.

PROGRAM MANAGEMENT - POLICY, PLANNING AND EVALUATION

1991 Program Request

The Agency requests a total of $1,157,700 supported by 17.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $273,100 and an increase of 2.2 total workyears from 1990. The increase results from an Office of Policy, Planning and Evaluation (OPPE) reorganization and the one-time reductions in 1990 associated with the sequestration and Section 517.

This request will provide the Assistant Administrator (AA) with sufficient staff and resources for the policy direction, special analyses, human resources initiatives, and budgetary and administrative support necessary to manage OPPE and its component offices efficiently and effectively. It will allow the AA to respond to inquiries from Congress and the Office of Management and Budget as well as from the Regions, State, local governments, and the public on OPPE issues. It also will enable the Agency to prepare appropriate responses to General Accounting Office evaluations of EPA programs.

1990 Program

In 1990, the Agency is allocating a total of $884,600 supported by 14.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. This program is providing overall policy direction and conducting activities necessary to manage the component offices of OPPE.

1989 Accomplishments

In 1989, the Agency obligated a total of $913,700 supported by 13.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. These funds supported the basic budgetary, administrative, analytic, and planning activities necessary to manage OPPE.

INTEGRATED ENVIRONMENTAL MANAGEMENT PROGRAM (IEMP)

1991 Program Request

The Agency requests no dollars and no workyears for this program. This represents a decrease of $2,746,800 and a decrease of 18.9 total workyears from 1990. The decrease reflects an OPPE reorganization which moves the IEMP geographic integration function to the Office of Pollution Prevention (OPP) and the science policy function to the Office of Regulatory Management and Evaluation (ORME).

1990 Program

In 1990, the Agency is allocating a total of $2,746,800 supported by 18.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

IEMP is disseminating the knowledge and experience from a limited number of completed state/Regional demonstration projects designed as models for transferring multi-media, risk-based environmental management methods to the states, Regions, and Indian tribes. Specific products include: state/Regional use of risk-based tools and integrated environmental management processes to set environmental action plans based on those priorities, and institutionalization of a negotiation process between state, Regional and national program managers which appropriately reflects an efficient balance of Federal/local partnership to address environmental issues and provide the basis for measuring the value of pollution control action.

IEMP also is concentrating on improving the links between scientific research and information needed for policy-making. It is sponsoring projects which expand risk analysis to account for ecological effects. The program works with other Agency offices to develop more realistic exposure data and exposure assumptions, and supports future regulatory activities such as management of contaminated sediments in near coastal waters and identification and assessment of the ecological impacts at Resource Conservation and Recovery Act (RCRA) waste sites. Finally, it works with program offices to develop better methods for evaluating the wide range of human health effects associated with subchronic exposures to pollution.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,748,600 supported by 17.3 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

IEMP completed a limited number of state and Regional demonstration projects designed as models for transferring multi-media, risk-based environmental management methods to the states and Regions. Non-participating states and Regions received some technical assistance. IEMP helped states and Regions to use risk analysis techniques and helped to improve the link between scientific research and policy-making. Projects included development of weight-of-evidence classification and potency estimation procedures for non-cancer effects; creation of classification schemes for addressing scientific uncertainty in cross-media comparative risk analysis; evaluation of available methods to assess ecological risks and damages of toxic pollutants; and identification of biological parameters that can be used to define and project the effectiveness of EPA regulatory programs.

OFFICE OF POLICY ANALYSIS (OPA)

1991 Program Request

The Agency requests a total of $17,524,400 supported by 93.2 workyears for this program, of which $10,600,300 will be for the Salaries and Expenses appropriation and $6,924,100 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $1,727,400 and a decrease of $3,453,300, respectively and an increase of 32.1 total workyears from 1990. The increases in Salaries and Expenses result from expanded efforts in global climate change, Clean Air Act implementation, and RCRA reauthorization studies as well as the one-time reductions in 1990 associated with the sequestration and Section 517. Additionally, OPA receives the new responsibilities of pesticides and toxic substances regulatory review and analysis, regulatory innovations, and energy policy analysis due to an OPPE reorganization. Benefits analysis and the economic research and risk communication programs move to ORME. The decrease in Abatement, Control and Compliance reflects the one-time cost associated with the 1990 Congressional add-on for climate change policy analyses. This level provides the necessary funding for climate activities.

OPA will use these resources to analyze EPA's highest priority regulatory actions and non-regulatory initiatives, focussing particularly on issues identified as posing high risks to health, environment and public welfare. OPA coordinates the Agency's activities on global climate change and directs its policy program, working closely with the Offices of Research and Development (ORD), Air and Radiation (OAR), and International Activities (OIA). It will concentrate on developing policy options for mitigating and adapting to climate change. OPA will support impact analyses and adaptive strategies in the United States, work with four international impacts studies, and assess domestic and international energy, forestry, and agriculture options for limiting emissions. The program also will support the Intergovernmental Panel on Climate Change (IPCC) process by preparing technical papers, conducting modeling analyses, and organizing a series of workshops. This analytical support will increase as the process of developing a climate convention continues in 1991-1992.

In the air media, OPA will focus on Clean Air Act implementation, with special emphasis on air toxics, acid rain and nonattainment. OPA will undertake a major effort to assist the Department of Energy in developing a National Energy Strategy, examining the Administration's policies towards energy conservation and corporate average fuel economy standards. The water media will see OPA analyzing possible amendments to the Clean Water Act and assisting in the analysis and implementation of the EPA Ground-water Strategy and water conservation policies. OPA will develop and implement cooperative programs with the U.S. Fish and Wildlife Service and other parts of the Department of Interior aimed at protecting and restoring ecological values. OPA will work with the Department of Agriculture (USDA) to develop implementation procedures for the 1990 Farm Bill, including Low Input Sustainable Agriculture practices and other pollution prevention measures for agriculture. For RCRA reauthorization, OPA will continue to provide input and analysis, playing a major role in industrial waste pollution prevention and economic incentives, comparative risks on Subtitle D, and financial responsibility. OPA will provide policy analysis review of pesticides usage, with a focus on quality and use of food residue data, cost risk analyses of pesticides and risk substitutes, and implementation of the Pesticides in Ground-water Strategy. In the toxic substances area, OPA will review regulatory activities, monitor the new chemicals program, and analyze such cross-media issues as lead.

1990 Program

In 1990, the Agency is allocating a total of $19,250,500 supported by 61.1 total workyears for this program, of which $8,872,900 is from the Salaries and Expenses appropriation and $10,377,600 is from the Abatement, Control and Compliance appropriation.

With these resources, OPA is analyzing proposed Clean Air Act amendments, implementation of the State Clean Water Strategy, the EPA Ground-water Strategy, and oceans initiatives and coordination of water and hazardous waste policies, RCRA reauthorization, Subtitle C, Subtitle D and corrective action programs. OPA continues to perform economic analyses with emphasis on use of benefit/cost evaluations in state water quality reports and on impacts of EPA regulations on different sectors of the economy. The Economic Research Program is determining economic damages to materials and waterbodies from acid precipitation, and the economic value of ground-water protection. OPA is working to improve integration of agricultural and environmental policies through review of the Food and Drug Administration and USDA and Interior regulations and review of their agriculture legislative proposals. OPA also is helping USDA implement aspects of the Conservation Reserve Program. Work on risk assessment/management/communication is focussing on training for EPA staff; technical assistance to program and Regional offices; and support to the Risk Assessment Council, the Risk Assessment Forum and the Center for Risk Management.

OPA has the lead responsibility for important aspects of an expanded Agency global climate change program, working closely with Agency programs and interagency groups. It is building on the reports to Congress, working with and integrating other EPA activities, positioning the Agency to evaluate all policy options, and providing stimulus to expand international understanding and involvement in response to strategy issues. Primary activities involve data gathering, analysis of reduction strategies, and conduct of policy analyses.

1989 Accomplishments

In 1989, the Agency obligated a total of $16,937,700 supported by 60.0 total workyears for this program, of which $8,001,000 was from the Salaries and Expenses appropriation and $8,936,700 was from the Abatement, Control and Compliance appropriation.

OPA analyzed EPA's highest priority regulatory actions and non-regulatory initiatives, which included policy implications of the National Acid Precipitation Program's final report, implementation issues for the chlorofluorocarbons control and tropospheric ozone problems, integrated water quality-based targeting strategy implementation, and cross-media impacts of solid wastes, hazardous substances and industrial wastes under Subtitle D. Benefit/cost analyses required under Executive Order 12291 continued in all program areas and the

Economic Research Program helped to develop new analytical methods to improve risk management. Work on risk assessment/management/communication focussed on training for EPA staff and technical assistance to program and Regional offices as well as support for the Center for Risk Management.

In the area of global climate change, OPA worked closely with ORD and OAR to complete and follow up on two major reports to Congress: "Policy Options for Stabilizing Climate" and the "Environmental Effects of Climate Change." OPA also worked with other agencies and organizations on climate issues, representing EPA in the Interagency National Climate Program and at conferences sponsored by the World Meteorological Organization and United Nations Environmental Programme. It refined the analytical framework for analyzing stabilization, building modeling systems for effects, and studying adaptive responses.

OFFICE OF REGULATORY MANAGEMENT AND EVALUATION (ORME)

1991 Program Request

The Agency requests a total of $8,022,700 supported by 74.4 total workyears for this program, of which $7,507,700 will be for the Salaries and Expenses appropriation and $515,000 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $2,172,800 and an increase of $515,000 respectively, and an increase of 9.9 total workyears from 1990. The increases in Salaries and Expenses and in Abatement, Control and Compliance reflect initiation of a new statistical program as well as the one-time reductions in 1990 associated with the sequestration and Section 517. Additionally ORME receives the new responsibilities of science policy integration, benefits analysis, economic research, risk communication activities and program evaluation due to an OPPE reorganization. The pesticides and toxic substances regulatory review functions move to OPA and regulatory innovations staff are divided between OPA and OPP.

ORME will manage the Agency's internal regulation review and analysis process, provide quality control and clearance for all EPA reporting and recordkeeping required of the public, and review regulatory and policy documents for compliance with all applicable requirements. It will provide the regulation development curriculum to program offices and Regions and will provide training/support for workgroup chairmen. Promotion of negotiation as an alternative to traditional rulemaking and faster use of consensus-building techniques in dispute resolution will continue. Science policy staff will support Agency-wide efforts to ensure quality and consistency in ecological and health risk assessments and explore new areas for contributions to environmental protection such as sustainable use of environmental resources, ecosystem valuation and the development of ecological guidelines. Program evaluation staff will undertake analytical studies to identify practical solutions to problems impeding effective implementation of EPA programs in areas such as permitting, compliance monitoring and environmental monitoring and will examine the effectiveness of Headquarters' actions on Regional and state activities in selected programs. ORME will assist program offices in the preparation of Regulatory Impact Analyses and conduct special economic analysis on financing, economic incentives and sustainable economic development. It also will manage the economic research and risk communication programs. Work on risk communication will focus on training for EPA staff and technical assistance to programs and Regional offices.

1990 Program

See Office of Standards and Regulations.

1989 Accomplishments

See Office of Standards and Regulations.

OFFICE OF STANDARDS AND REGULATIONS (OSR)

1991 Program Request

See the Office of Regulatory Management and Evaluation

1990 Program

In 1990 the Agency is allocating a total of $5,334,900 supported by 64.5 workyears for this program, all of which is from the Salaries and Expenses appropriation.

OSR continues to administer the Agency's internal regulation review and analysis process. It reviews regulatory and policy documents for compliance with all applicable requirements and ensures Agency compliance with the amended Paperwork Reduction Act (PRA). OSR is beginning development of a new statistical program, identifying the statistical quality and credibility of accessible environmental data for use in a proposed national compendium of environmental statistics. Support for the Office of Pesticides and Toxic Substances emphasizes policy development and oversight of EPA's biotechnology program and moves toward resolution of indemnification issues and problems associated with disposal of cancelled pesticides.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,215,700 supported by 63.6 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

OSR continued to administer and direct the Agency's internal regulation review and analysis process and to ensure compliance with the PRA. OSR expanded its regulation development course audience to include the Regions and additional program offices. In preparing for the new statistical program, OSR identified the major Federal data bases where environmental data are available. It assisted enforcement offices in developing optional enforcement inspection strategies and supported implementation of Data Quality Objectives. OSR promoted use of consultation and consensual activities in issue resolution, decisionmaking and negotiation. Regulatory innovation focussed on technical assistance to Regions/states in identifying and controlling nonpoint sources of pollution and in identification and promotion of integrated waste management alternatives to reduce waste. Pesticides support emphasized assistance in meeting demands of the 1988 amendments to the Federal Insecticide, Fungicide and Rodenticide Act, and analyses in the area of toxic substances concentrated on development of an Agency policy in testing chemicals.

OFFICE OF POLLUTION PREVENTION (OPP)

1991 Program Request

The Agency requests a total of $7,945,000 and 72.2 total workyears for this program, of which $6,445,000 will be for the Salaries and Expenses appropriation and $1,500,00 will be for the Abatement, Control and Compliance appropriation. This represents an increase of $3,348,400 and an increase of $1,500,000 respectively and an increase of 18.8 total workyears from 1990. The increases in Salaries and Expenses and in Abatement, Control and Compliance reflect expanded efforts in pollution prevention and strategic planning as well as the one-time reductions in 1990 associated with sequestration and Section 517. Additionally, OPP receives the new responsibilities of geographic integration, and regulatory innovations due to an OPPE reorganization. The program evaluation function moves to ORME.

In 1991, OPP will continue to mobilize Federal leadership and manage the Agency's pollution prevention program. Cross-media initiatives will target application of pollution prevention approaches and incentives to industrial toxics, nonpoint source problems, and energy and transportation-related environmental issues. The Office will complete pollution prevention-based studies of regulatory issues related to RCRA, the new Clean Air Act, and the Clean Water Act, and will integrate the study findings into OPPE's regulatory review functions. Demonstrations of pollution prevention applications in enforcement and water permitting activities will be completed. Analyses and implementation-oriented demonstration projects (e.g., education, labelling) aimed at altering consumer behavior will produce findings and recommendations transferrable to broader audiences. OPP will sponsor a state and local conference to publicize the results of the state pollution prevention grants program. Analysis of data from the Toxics Release Inventory and other Agency databases will continue in order to identify future pollution prevention targets, as well as to develop a future strategy for data collection and use for pollution prevention. A national Pollution Prevention Awards program will acknowledge state, community and industry leaders in this area.

OPP will continue to support the Agency's planning and performance measurement management systems. In addition, OPP will expand the 4-year strategic planning program to include cross-media service organizations (ORD, OIA and the Office of Enforcement and Compliance Monitoring), cross-media programs (e.g., global climate, pollution prevention), and Regional offices along with the four media offices. OPP will develop an Agency-wide strategic plan and complete a system for connecting planning priority decisions to budget distribution. It will analyze environmental indicators contained in the strategic plans and begin media-specific studies designed to develop stronger indicators of true environmental benefit. The Office will provide support to all ten Regions for comparative risk analyses and resulting Regional strategic options development will continue, with plans which reflect Region-specific exceptions to the national strategic plans produced. OPP will expand technical, methodological and analytical assistance to states for strategic planning and environmental indicator development, resulting in clear strategies to target the worst environmental problems more effectively, apply pollution prevention approaches more aggressively, and leverage the Federal/local partnership more efficiently. Finally, the legislative planning staff will develop ideas for improvements in the present statutory framework.

1990 Program

See the Office of Management Systems and Evaluation.

1989 Accomplishments

See the Office of Management Systems and Evaluation.

OFFICE OF MANAGEMENT SYSTEMS AND EVALUATION (OMSE)

1991 Program Request

See the Office of Pollution Prevention.

1990 Program Request

In 1990, the Agency is allocating a total of $3,096,600 supported by 53.4 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

Improvements in EPA's management systems are focusing on developing strategies for EPA programs that define specific environmental goals that can be tracked over time. In addition to work on selected programs' strategies, OMSE is working with the hazardous waste, ground-water, nonpoint source, and pollution prevention programs to define appropriate environmental indicators that complement the programs' goals. The Office is focussing on improving EPA's priority-setting process and linking budget decisions more closely with health and environmental priorities by designing and managing a 4-year strategic planning effort. Four national strategic plans for the media Offices of Water, Air, Pesticides and Toxic Substances, and Solid Waste and Emergency Response and three Regional risk management strategies are being finalized as part of this process. The Office is completing a project involving three states in Region X related to the vulnerability of ground-water to pesticides contamination. Program evaluation projects include problem assessments and problem-solving efforts in several EPA program areas, including municipal and other solid waste, air toxics, ground-water contamination, and infectious waste, as well as reviews of state/EPA interactions in selected programs. In addition, the legislative planning staff is developing ideas for changes in the agency's statutory framework. In particular, pollution prevention legislation and RCRA reauthorization work is beginning.

1989 Accomplishments

In 1989, the Agency obligated $2,788,300 supported by 48.4 total workyears, all of which was from the Salaries and Expenses appropriation.

OMSE managed the Agency's planning and management system and adapted it to meet new management objectives. OMSE supported development of an Agencywide strategy that articulated both management and environmental goals for each major program and enabled the Administrator to track progress over time and evaluate the effectiveness of the programs. OMSE demonstrated and promoted ways to use existing environmental data for problem assessment, priority-setting, and program evaluation at national, Regional and local levels and conducted a seminar on effective ways to manage for environmental results. OMSE also completed a demonstration project in Oregon to test ways to improve the use of environmental information in decisions concerning water resources. In addition, OMSE began a project with three states in Region X to assess vulnerability of ground-water to pesticides contamination. Evaluation projects included the development and evaluation of inexpensive methods of motivating people to test their homes for radon, an effort to define the roles of Headquarters and Regional offices in implementing the Pesticides in Ground-water Strategy, an examination of the process by which Federal agencies report funding for pollution abatement and clean-up projects, and an evaluation of a pilot test of differential oversight in the National Pollutant Discharge Elimination System program under the Clean Water Act.

POLLUTION PREVENTION PROGRAM (PPP) (GRANTS)

1991 Program Request

The Agency requests a total of $3,000,000 for this program, all of which will be for the Abatement, Control and Compliance appropriation. This represents a technical decrease of $1,110,800 in Salaries and Expenses, a decrease of $5,200,800 in Abatement Control and Compliance, and a decrease of 9.7 total workyears from 1990. The decreases in Salaries and Expenses and Abatement, Control and Compliance reflect an OPPE reorganization in which personnel and support costs for pollution prevention move to OPP, leaving the PPP budget devoted solely to state grants. Abatement, Control and Compliance is further reduced due to the one-time cost associated with the 1990 Congressional add-on for pollution prevention state grants. This level provides the necessary funding for this program.

In 1991, these resources will fund approximately 14 new state pollution prevention demonstration programs. These demonstration programs will provide innovative pollution prevention applications for specific industries, geographic environments, or pollutants that are transferrable to states and localities. Awards will be made on the basis of a competitive process to assure that dollars are distributed to the most promising and most effective pollution prevention efforts. Evaluations of these grants and a state conference intended to display the results will be funded by OPP.

1990 Program

In 1990, the Agency is allocating a total of $9,311,600 supported by 9.7 total workyears for this program, of which $1,110,800 is from the Salaries and Expenses appropriation and $8,200,800 is from the Abatement, Control and Compliance appropriation.

PPP continues to pursue the four goals identified and initiated in 1989, but with a more focussed agenda. Agency products include availability of information through a national clearinghouse and a hotline on technologies, substitutions, and documentation of approaches that are known to be effective for specific industries and facilities as well as recommendations on how to create additional incentives for pollution prevention and how to eliminate existing barriers. Support of state pollution prevention programs through the distribution of multi-media grants continues. In addition, the program is evaluating existing state pollution prevention programs to be used by the states and EPA as a future planning and priority-setting tool. The program also continues to work on developing reliable indicators of waste reduction and pollution prevention.

It is beginning to use data collected from the Superfund Amendments and Reauthorization Act, section 313, and from other Agency data bases to identify national trends and to target areas of opportunity.

1989 Accomplishments

In 1989, the Agency obligated $2,865,700 supported by 8.8 total workyears, of which $808,800 was from the Salaries and Expenses appropriation and $2,056,900 was from the Abatement, Control and Compliance appropriation.

PPP worked to meet four specific goals: (1) communicating to state and local governments, industry, public interest groups, citizen groups, Congress, Federal agencies and other appropriate organizations the need for and capability to achieve pollution prevention and source reduction initiatives; (2) developing a multi-media approach through regulatory review of incentives and disincentives for pollution prevention and through creation of media-specific pollution prevention plans; (3) encouraging state and local programs through distribution of grant dollars to state programs to support state pollution prevention programs and through creation of networks of technical experts available to local governments; and (4) evaluating progress and targeting opportunities through development of reliable indicators of pollution prevention and implementation of a data collection strategy. Products of this first year's work included the development of a series of media-specific pollution prevention strategies which tied the four objectives together, the awarding through competitive processes of grant dollars to 14 states and the distribution of projected funds for innovative pollution prevention initiatives to be implemented in 1991 by EPA Headquarters and Regional offices.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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AGENCY MANAGEMENT
Office of Administration and Resources Management

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Program Management - Administration						
Salaries & Expenses		$1,949.8	$1,472.1	$1,382.9	$1,577.1	$194.2
	TOTAL	$1,949.8	$1,472.1	$1,382.9	$1,577.1	$194.2
Financial Management Headquarters						
Salaries & Expenses		$8,363.2	$7,502.4	$7,528.6	$9,454.7	$1,926.1
	TOTAL	$8,363.2	$7,502.4	$7,528.6	$9,454.7	$1,926.1
Office of the Comptroller						
Salaries & Expenses		$5,074.9	$6,104.7	$5,978.2	$7,133.3	$1,155.1
Abatement Control and Compliance		$120.0	$455.7	$648.4	$2,349.4	$1,701.0
	TOTAL	$5,194.9	$6,560.4	$6,626.6	$9,482.7	$2,856.1
Contracts and Grants Management						
Salaries & Expenses		$11,224.4	$11,333.4	$11,886.9	$13,613.7	$1,726.8
	TOTAL	$11,224.4	$11,333.4	$11,886.9	$13,613.7	$1,726.8
Organization and Health Services						
Salaries & Expenses		$2,440.5	$2,781.1	$2,747.5	$3,135.8	$388.3
	TOTAL	$2,440.5	$2,781.1	$2,747.5	$3,135.8	$388.3
Facilities & Management Services						
Salaries & Expenses		$7,532.1	$7,861.5	$7,675.3	$8,335.4	$660.1
	TOTAL	$7,532.1	$7,861.5	$7,675.3	$8,335.4	$660.1
Information Systems & Services						
Salaries & Expenses		$9,575.5	$9,800.3	$10,551.9	$11,727.4	$1,175.5
Abatement Control and Compliance			$977.1	$865.2	$1,000.0	$134.8
	TOTAL	$9,575.5	$10,777.4	$11,417.1	$12,727.4	$1,310.3
Office of Human Resources Management						
Salaries & Expenses		$8,558.9	$9,117.2	$9,014.0	$9,375.5	$361.5
	TOTAL	$8,558.9	$9,117.2	$9,014.0	$9,375.5	$361.5
TOTAL:						
Salaries & Expenses	TOTAL	$54,719.3	$55,972.7	$56,765.3	$64,352.9	$7,587.6
Abatement Control and Compliance	TOTAL	$120.0	$1,432.8	$1,513.6	$3,349.4	$1,835.8
Office of Administration and Resources Management	TOTAL	$54,839.3	$57,405.5	$58,278.9	$67,702.3	$9,423.4

AGENCY MANAGEMENT
Office of Administration and Resources Management

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PERMANENT WORKYEARS					
Program Management - Administration	24.6	24.8	20.8	23.9	3.1
Financial Management Headquarters	133.0	140.8	131.1	140.0	8.9
Office of the Comptroller	77.0	84.6	81.6	84.4	2.8
Contracts and Grants Management	218.2	240.0	237.5	255.5	18.0
Organization and Health Services	37.7	46.5	47.8	50.4	2.6
Facilities & Management Services	164.5	177.2	167.0	181.2	14.2
Information Systems & Services	151.8	164.3	168.3	178.9	10.6
Office of Human Resources Management	159.7	178.9	165.8	180.4	14.6
TOTAL PERMANENT WORKYEARS	996.5	1,057.1	1,019.9	1,094.7	74.8
TOTAL WORKYEARS					
Program Management - Administration	27.9	24.8	21.5	23.9	2.4
Financial Management Headquarters	136.4	140.8	136.4	140.0	3.6
Office of the Comptroller	79.7	84.6	83.6	84.4	.8
Contracts and Grants Management	222.5	240.0	241.7	255.5	13.8
Organization and Health Services	41.1	46.5	47.8	50.4	2.6
Facilities & Management Services	174.3	177.2	174.0	181.2	7.2
Information Systems & Services	159.6	164.3	173.1	178.9	5.8
Office of Human Resources Management	169.7	178.9	178.7	180.4	1.7
TOTAL WORKYEARS	1,011.2	1,057.1	1,056.8	1,094.7	37.9

MANAGEMENT AND SUPPORT

Agency Management

Office of Administration and Resources Management

Budget Request

The Agency requests a total of $67,702,300 supported by 1094.7 total workyears for 1991, an increase of $9,423,400 and an increase of 37.9 total workyears from 1990.

PROGRAM MANAGEMENT - ADMINISTRATION

1991 Program Request

The Agency requests a total of $1,577,100 supported by 23.9 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. Total workyears will include 21.9 from the Salaries and expenses appropriation and 2.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $194,200 and .4 in total workyears in the Salaries and Expenses appropriation and an increase of 2.0 total workyears in the Reregistration and Expedited Processing Revolving Fund. The increase in Salaries and Expenses reflects increased personnel and support costs.- In 1991, the office will continue to provide guidance and direction as well as program and administrative support for OARM, direct and manage OARM's resources, administer and report on OARM's portion of the Administrator's Action Tracking System (ATS) and the Strategic Targeted Activities for Results System (STARS), and conduct strategies to enhance the efficiency and effectiveness of the Agency. This office will also coordinate and consolidate OARM's internal control reporting, ensure compliance with the Freedom of Information Act and Agency audit recommendations, and oversee OARM information management needs.

1990 Program

In 1990, the Agency is allocating a total of $1,382,900 supported by 21.5 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are used for overall policy direction and guidance to the Agency's management programs, budget development and execution, review of organization and consolidation issues, internal control reporting, Freedom of Information Act coordination, ATS and STARS reporting, and special analyses on management issues.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,949,800 supported by 27.9 total workyears for this program all of which was from the Salaries and Expenses appropriation. These resources were used to provide office-wide management and policy direction, manage the development and execution of OARM's budget, provide Action Tracking and Strategic Planning and Management reports, coordinate internal control reporting and responses to Freedom of Information Act requests, and conduct special analyses and projects on Agency-wide management issues.

FINANCIAL MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $9,454,700 supported by 140.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. Total workyears will include 139.5 from the Salaries and Expenses appropriation and .5 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $1,926,100 and 4.0 in total workyears from the Salaries and Expenses appropriation and a decrease of .4 total workyears from the Reregistration and Expedited Processing Revolving Fund. The increase in Salaries and Expenses reflects increased personnel and support costs and provides for financial management initiatives due to increased audit activities. The increase in workyears will provide for financial integrity activities. The office's major priority for 1991 is to provide enhancements to the Integrated Financial Management System to meet Agency reporting requirements and integrate administrative systems in support of OMB Circular A-127. These enhancements will require additional data analysis, module testing, policies and procedures, contract management support, and training of Headquarters and Regional staff. Other initiatives include: (1) Strengthening the financial integrity of basic operations by supporting initiatives that improve the delivery of financial services to clients and implement strong quality assurance for all functions and locations; (2) Improving analytic and reporting capabilities by developing a program directed at improving financial data analysis and enhancing reporting capabilities; (3) Maintaining a long range strategic planning program to enable the division to identify future objectives and achieve them in a planned and logical manner; and (4) Increasing quality assurance reviews to improve financial integrity. This request will also allow Headquarters, Cincinnati, Las Vegas and Research Triangle Park offices to provide necessary financial accounting and fiscal services.

1990 Program

In 1990, the Agency is allocating a total of $7,528,600 supported by 136.4 total workyears for this program, all of which is from the Salaries and Expenses appropriation. Total workyears include 135.5 from the Salaries and Expenses appropriation and .9 total workyears from the Reregistration and Expedited Processing Revolving Fund. These resources provide a full array of financial services to EPA managers, including: payroll, accounting, debt collection, accounts payable and policy guidance. This program also manages the Agency's Integrated Financial Management System. The 1990 program emphasis is on implementing the Office of Management and Budget's Circular A-127 requirements, implementing Section 4 of the Federal Managers' Financial Integrity Act of 1982, implementing a new ad hoc report writer, increasing the timeliness of payments processed as required by the Prompt Payment Act, exploring further cash management initiatives, and bringing the Integrated Financial Management System into full compliance with General Accounting Office standards.

1989 Accomplishments

In 1989, the Agency obligated a total of $8,363,200 supported by 136.4 total workyears, all of which was from the Salaries and Expenses appropriation. Total workyears included 136.3 from the Salaries and Expenses appropriation and .1 from the Reregistration and Expedited Processing Revolving Fund. With these resources, the Agency improved the financial services provided by Headquarters and Research Triangle Park financial operations, developed standard quality assurance programs for the Agency, implemented and developed a long-term planning process for the Integrated Financial Management System, and transferred the software programs to operate the Integrated Financial Management System at the National Computer Center.

OFFICE OF THE COMPTROLLER

1991 Program Request

The Agency requests a total of $9,482,700 supported by 84.4 total workyears for this program. Total dollars will include $7,133,300 for the Salaries and Expenses appropriation and $2,349,400 for the Abatement Control and Compliance appropriation. Total workyears will include 83.4 from the Salaries and Expenses appropriation and 1.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $1,155,100 in the Salaries and Expenses appropriation, an increase of $1,701,000 in the Abatement Control and Compliance appropriation and an increase of .8 total workyears in the Reregistration and Expedited Processing Revolving Fund. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase in Abatement Control and Compliance will support P3 activities, management integrity, and Agency program management needs. We will continue implementation of OMB Circular A-127, a major initiative which will integrate and improve the Agency's financial management systems, support the Agency's Public-Private Partnership (P3) efforts, and enhance the level of support for the Agency's productivity activities.

These resources will provide the Office of the Comptroller with the capabilities to perform all mandatory activities associated with OMB and Congressional budget submissions for 1992 and 1993, provide budget analyses and reports to Agency program offices through the Resource Planning and Budgeting System, and maintain an allocation, control and review system for all workyear and financial resources. The office will continue its focus on maintaining EPA's Productivity Improvement Program, which will reduce costs and enhance program effectiveness across the Agency. The Comptroller will also continue to implement the Federal Managers' Financial Integrity Act, and implement OMB Circular A-76.

1990 Program

In 1990, the Agency, is allocating a total of $6,626,600 supported by 83.6 total workyears for this program, of which $5,978,200 is from the Salaries and Expenses appropriation and $648,400 is from the Abatement Control and Compliance appropriation. Total workyears include 83.4 from the Salaries and Expenses appropriation and .2 from the Reregistration and Expedited Processing Revolving Fund. With these resources the Office of the Comptroller prepares the 1991 budget request, develops current and outyear budget guidance to program and Regional offices, analyzes budget issues, develops and implements Agency budget policy, and administers and provides policy guidance to EPA managers on a range of fiscal concerns.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,194,900 supported by 79.7 total workyears for this program, of which $5,074,900 was from the Salaries and Expenses appropriation and $120,000 from the Abatement Control and Compliance appropriation. With these resources, this program managed the development of the 1990 Operating Plans, provided budget and policy guidance to Program and Regional offices for the 1991 budget requests, performed oversight of audit resolution and follow-up, implemented the Federal Managers' Financial Integrity Act, and continued EPA's Productivity Improvement Program.

CONTRACTS AND GRANTS MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $13,613,700 supported by 255.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. Total workyears will include 251.0 from the Salaries and Expenses appropriation and 4.5 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $1,726,800 and 10.0 total workyears in the Salaries and Expenses appropriation and an increase of 3.8 total workyears from the Reregistration and Expedited Processing Revolving Fund. The increase in workyears will fund growing contract placement and grant management needs as a result of FIFRA and the Clean Air Act and support Financial Integrity activities. The request will enable the Agency to process and award new contracts and purchase orders, manage and close out existing contracts, train project officers and contracting officers, evaluate contractor cost proposals, process contract terminations and claims, and provide technical review, policy guidance, and administrative oversight and management to the three procurement operations in Headquarters, Cincinnati, and Research Triangle Park (RTP). In the grants area, resources will allow the Agency to develop and interpret regulations, policy and procedural guidance for new and existing Agency-wide assistance programs; award and administer Headquarters grants and loans, cooperative agreements, and interagency agreements; provide outreach to the Regions, states and Federal assistance recipients; continue to modify, update, and simplify assistance regulations; continue in-house audit and cost analyses; increase suspension and debarment actions to combat waste, fraud and abuse in Federal assistance and procurement programs; implement the Clean Air Act Amendments and enhance the role of the Agency's Grants Information System Management Council.

1990 Program

In 1990, the Agency is allocating a total of $11,886,900 supported by 241.7 total workyears for this program, all of which is from the Salaries and Expenses appropriation. Total workyears include 241.0 from the Salaries and Expenses appropriation and .7 from the Reregistration and Expedited Processing Revolving Fund. These resources are being used to perform a full range of grants and contract activities including awarding and managing contracts, grants, loans, purchase orders, and interagency agreements. This also includes negotiating indirect cost rates, processing terminations and claims, managing procurement operations at Headquarters, Cincinnati and RTP, publishing a government-wide consolidated debarment regulation, developing suspension and debarment cases under the EPA assistance and procurement program, strengthening internal grant management controls, building Region/state/recipient capacity, addressing regulation and policy development, continuing to implement the new State Revolving Fund policy, finalizing the implementation of a new automated assistance document system, developing an automated Congressional Notification System, and providing project and contracting officer training.

1989 Accomplishments

In 1989, the Agency allocated a total of $11,224,400 supported by 222.5 total workyears for this program, all of which was from the Salaries and Expenses appropriation. The major accomplishments in this program area included increased emphasis on contract management, continued implementation of the Federal Acquisition Regulation, improvement of the contract planning system and automated procurement and grants document systems, issuance of additional awards for the Asbestos School Hazard Abatement Program, development of a Grants Information System Management Council and the implementation of an automated grant document system in the Regions. We also published the Drug Free Workplace Act Regulations, took noncompliance actions and recovered Federal funds from program participants who abused the privileges of Federal assistance, and developed and issued policy and guidance for the State Revolving Fund.

ORGANIZATION AND HEALTH SERVICES

1991 Program Request

The Agency requests a total of $3,135,800 supported by 50.4 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $388,300 and 3.0 total workyears in the Salaries and Expenses appropriation and a decrease of .4 total workyears in the Reregistration and Expedited Processing Revolving Fund. The increase in the Salaries and Expenses reflects increased personnel and support costs. The increase in workyears will expand our health and safety and environmental compliance activities. The Agency will continue to coordinate the management of the planning, design, construction and move processes for a new consolidated Agency headquarters, and focus on construction planning and coordination. Particular emphasis will be placed on interior/exterior design monitoring as well as developing a management oversight mechanism. Our environmental compliance program will continue to perform audits and provide technical assistance and training to Agency laboratories. Waste minimization will be a new area receiving emphasis. Our health and safety program will continue to monitor Agency workspace for safe and healthful working conditions and provide technical assistance and training. In addition, we will expand our efforts to ensure that Agency organizations, management systems and processes are as efficient and effective as possible by conducting management and organization analytical studies; overseeing the Agency's directives systems; managing the development and review of Agency-wide delegations of authority and reorganizations; managing the Agency's public advisory committees; administering management advisory and support services contracts; and providing technical assistance on management and organization issues.

1990 Program

In 1990 the Agency is allocating a total of $2,747,500 supported by 47.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. Total workyears include 47.4 from the Salaries and Expenses appropriation and .4 from the Reregistration and Expedited Processing Revolving Fund. These resources provide high quality management assistance to all Agency organizations. We will design an automated Agency directives system to provide current information essential to the Agency's evolving mission. Management assistance will enable the Agency to respond to complex environmental issues such as source reduction, technology transfer, and alternative financing mechanisms. Delegations of authority and organizational analyses will strive towards strengthening management processes and streamlining organizations. Planning for the new headquarters facility will involve identification of a developer who best meets the Agency's functional requirements. Resources will be devoted to refining specific evaluation criteria, conducting detailed evaluation of developer proposals and completing specific site analyses. An environmental compliance manual and model program will be established for Agency laboratories. Environmental compliance audits will focus on Agency laboratories with prior problems. Our health and safety program will concentrate on improving the indoor air quality of our facilities, implementing and monitoring asbestos operations and maintenance programs, and reviewing the drinking water in our facilities to ensure safe levels of lead.

1989 Accomplishments

In 1989, the Agency obligated a total of $2,440,500 supported by 41.1 total workyears for this program, all of which was from the Salaries and Expenses appropriation. A comprehensive review of EPA's organizational history, legislative responsibilities, and priorities was prepared to facilitate the management transition to the incoming Administration. Management and contract assistance resulted in a series of organizational and management improvements for Agency responsibilities required by current and new environmental legislation. Additionally, technical support resulted in the establishment of five new Agency advisory committees. The planning process for the new headquarters facility involved refinement of previously established technical requirements incorporating a number of environmental considerations, including pollution prevention, energy conservation and indoor air quality. Environmental compliance program evaluation, training and technical support was provided to our laboratories, and Agency health and safety programs were reviewed.

FACILITIES AND MANAGEMENT SERVICES

1991 Program Request

The Agency requests a total of $8,335,400 supported by 181.2 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. Total workyears include 179.7 from the Salaries and Expenses appropriation and 1.5 total workyears from the Reregistration and Expedited

Processing Revolving Fund. This represents an increase of $660,100 and 7.0 total workyears in the Salaries and Expenses appropriation and .2 total workyears in the Reregistration and Expedited Processing Revolving Fund. The increase in Salaries and Expenses reflects increased personnel and support costs. The increase in workyears will fund facility management needs as a result of the Clean Air Act and provide for a Health and Safety Officer in Cincinnati. With these resources the Agency will administer the Nationwide Support, Headquarters Support, and Buildings and Facilities budgets, provide operational support and housekeeping services, and monitor and direct contractor resources under support contracts, with particular efforts to improve working conditions at the Waterside Mall Complex.

1990 Program

In 1990, the Agency is allocating a total of $7,675,300 supported by 174.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. Total workyears include 172.7 from the Salaries and Expenses appropriation and 1.3 total workyears from the Reregistration and Expedited Processing Revolving Fund. These funds are being used to provide timely, high quality and cost effective facilities management and support services for EPA facilities in Washington, Research Triangle Park (RTP), North Carolina and Cincinnati, Ohio. These resources provide on-going services in the areas of property and space management, operational services, office support services, real estate and lease enforcement support, transportation management, printing and publication operations, security services, and facilities design and construction management. We are also expanding our improvement efforts at the Waterside Mall Complex.

1989 Accomplishments

In 1989, the Agency obligated a total of $7,532,100 supported by 174.3 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources the Agency provided responsive facilities management services to EPA facilities in Washington, RTP and Cincinnati, established better administrative controls over property management, and effectively managed space needs. We also initiated planning for the new Headquarters facility, improved ventilation throughout Waterside Mall and provided effective security services. This program supervised the design and construction of a new water quality monitoring field station in Newport, Oregon; the design of the clinical inhalation research lab in Chapel Hill, North Carolina; the construction of the radiation laboratory in Montgomery, Alabama; the design of the new Biotechnology Lab in Gulf Breeze, Florida; and the design of the Edison, New Jersey Laboratory.

INFORMATION SYSTEMS AND SERVICES

1991 Program Request

The Agency requests a total of $12,826,900 supported by 178.9 total workyears for this program of which $11,727,400 will be for the Salaries and Expenses appropriation and $1,099,500 will be for the Abatement Control and Compliance appropriation. This represents an increase in the Salaries and Expenses appropriation of $1,175,500 and 6.0 total workyears, a decrease of .2

projects under analysis. The Systems Development Center was established to assist in the development and enhancement of our national program data systems.

HUMAN RESOURCES MANAGEMENT

1991 Program Request

The Agency requests a total of $9,375,500 supported by 180.4 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. Total workyears will include 177.4 from the Salaries and Expenses appropriation and 3.0 from the Reregistration and Expedited Processing Revolving Fund. This represents an increase of $361,500 in the Salaries and Expenses appropriation and an increase of 1.7 total workyears from the Reregistration and Expedited Processing Revolving Fund. This supports expansion of the Technology Transfer Program to states, local and tribal governments, managerial and executive development, and increased delegated examining authority for key employee groups and high priority occupations. This program will continue recruitment, position management, classification, performance management, pay administration, personnel and payroll processing, labor management and employee relations, and technical assistance and advisory services. It is also institutionalizing the Human Resources initiatives begun during the last several years. These include: extension of the EPA Institute, creation and delivery of programs dealing with important workplace issues (e.g. flexiplace and leave bank), expansion of workforce planning and organizational programs, streamlining and simplifying employment and position classification programs, and developing and implementing executive and management development programs.

1990 Program

In 1990, the Agency is allocating a total of $9,014,000 supported by 178.7 total workyears for the program, all of which is from the Salaries and Expenses appropriation. Total workyears include 177.4 from the Salaries and Expenses appropriation and 1.3 from the Reregistration and Expedited Processing Revolving Fund. These resources will provide professional and administrative recruitment services, selection and placement of new employees, centralized examination and referral services, position management, classification and job analysis , advice to management on labor management and employee relations, employee and management development services, and personnel and payroll processing. Policy guidance and national support will be provided to the Agency. These resources will allow for maintenance of personnel data and information systems including updating the workforce snapshots book. Among the Human Resources initiatives to be introduced in 1990 are the broader use of the EPA Institute to transfer technology to state, local and tribal governments and the implementation of an automated catalogue of all EPA taught courses nationwide. The Agency will also establish its own Intern Program, expand management courses and enhance supplemental managerial development programs. In addition, EPA will field a leave bank program and pilot a flexiplace program.

1989 Accomplishments

In 1989, the Agency obligated a total of $8,558,900 supported by 169.7 total workyears for the program, all of which was from the Salaries and Expenses appropriation. The Agency implemented and expanded key Human Resources initiatives. Among those initiatives was the further expansion of the EPA Institute to Regional and field locations and the development of managerial courses including a Core Course for Executives. The Agency also simplified its workforce planning methodology including the introduction of a workforce snapshots book for supervisors and managers, accepted some delegated authority and implemented employment flexibility to streamline the employment process. The Agency implemented a comprehensive program to provide continuous assistance on the FERS and Civil Service Retirement System Programs, and further consolidated direct contact personnel services for Headquarters employees in our Human Resources Service Center. Resources supported improvement and utilization of personnel data information systems and provided continuing support to meet the Agency's special recruitment needs.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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REGIONAL MANAGEMENT

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Resource Management - Regions						
Salaries & Expenses		$1,837.0	$1,801.3	$1,761.1	$2,066.3	$305.2
	TOTAL	$1,837.0	$1,801.3	$1,761.1	$2,066.3	$305.2
Financial Management - Regions						
Salaries & Expenses		$3,179.0	$3,091.5	$3,458.5	$3,510.1	$51.6
	TOTAL	$3,179.0	$3,091.5	$3,458.5	$3,510.1	$51.6
Human Resources Mgt - Regions						
Salaries & Expenses		$3,836.2	$3,771.3	$3,781.4	$4,487.6	$706.2
	TOTAL	$3,836.2	$3,771.3	$3,781.4	$4,487.6	$706.2
Administrative Management - Regions						
Salaries & Expenses		$6,794.3	$7,104.6	$7,724.8	$9,050.0	$1,325.2
	TOTAL	$6,794.3	$7,104.6	$7,724.8	$9,050.0	$1,325.2
Regional Management						
Salaries & Expenses		$12,213.6	$11,181.2	$11,945.7	$13,452.4	$1,506.7
	TOTAL	$12,213.6	$11,181.2	$11,945.7	$13,452.4	$1,506.7
Regional Counsel						
Salaries & Expenses		$4,007.1	$4,194.0	$3,689.5	$5,031.3	$1,341.8
	TOTAL	$4,007.1	$4,194.0	$3,689.5	$5,031.3	$1,341.8
Planning, Evaluation & Analysis - Regions						
Salaries & Expenses		$3,817.6	$4,432.6	$4,341.5	$5,227.3	$885.8
	TOTAL	$3,817.6	$4,432.6	$4,341.5	$5,227.3	$885.8
TOTAL:						
Salaries & Expenses		$35,684.8	$35,576.5	$36,702.5	$42,825.0	$6,122.5
Regional Management	TOTAL	$35,684.8	$35,576.5	$36,702.5	$42,825.0	$6,122.5

REGIONAL MANAGEMENT

(DOLLARS IN THOUSANDS)

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PERMANENT WORKYEARS					
Resource Management - Regions	36.5	40.8	40.2	40.8	.6
Financial Management - Regions	85.7	89.5	85.9	89.5	3.6
Human Resources Mgt - Regions	91.7	93.0	85.7	103.0	17.3
Administrative Management - Regions	157.4	188.8	178.9	209.8	30.9
Regional Management	185.9	187.0	180.2	187.0	6.8
Regional Counsel	74.0	83.0	78.1	93.0	14.9
Planning, Evaluation & Analysis - Regions	74.2	97.9	87.9	101.5	13.6
TOTAL PERMANENT WORKYEARS	705.4	780.0	736.9	824.6	87.7
TOTAL WORKYEARS					
Resource Management - Regions	39.9	40.8	40.8	40.8	0.0
Financial Management - Regions	90.2	89.5	89.5	89.5	0.0
Human Resources Mgt - Regions	100.0	93.0	93.0	103.0	10.0
Administrative Management - Regions	178.7	188.8	189.0	209.8	20.8
Regional Management	205.7	187.0	192.3	187.0	-5.3
Regional Counsel	81.0	83.0	82.9	93.0	10.1
Planning, Evaluation & Analysis - Regions	81.0	97.9	90.8	101.5	10.7
TOTAL WORKYEARS	776.5	780.0	778.3	824.6	46.3

MANAGEMENT AND SUPPORT

Regional Management

Budget Request

The Agency requests a total of $42,825,000 supported by 824.6 total workyears for 1991, an increase of $6,122,500 and 46.3 workyears from 1990. All of the request is for the Salaries and Expenses appropriation.

RESOURCE MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $2,066,300 supported by 40.8 total workyears, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $305,200 and no change in total workyears from 1990. The increase in Salaries and Expenses will provide for anticipated salary and expense needs in FY 1991 and more fully address shortfalls in this account which have existed the past few years. This level of funding supports Regional resource management and control activities, including budget and operating plan development and workload analysis. In addition, these resources will allow the Regional offices to continue implementing the Federal Managers' Financial Integrity Act and further strengthen funds control.

1990 Program

In 1990, the Agency is allocating a total of $1,761,100 supported by 40.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to conduct budgeting and resource analysis functions in the ten Regional offices.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,837,000 supported by 39.9 total workyears for this program, all of which was from the Salaries and Expenses appropriation. These resources allowed Regional Administrators to effectively and efficiently manage their resources and operating plan processes.

FINANCIAL MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $3,510,100 supported by 89.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $51,600 and no change in workyears from 1990. The increase in Salaries and Expenses will provide for anticipated salary and expense needs for FY 1991 and more fully address shortfalls in this account which have existed the past few years. It also provides the capability to continue conducting internal control reviews as required by the Federal Managers' Financial Integrity Act of 1982 as well as Cash Management Reviews mandated by the Deficit Reduction Act of 1984. The acquisition of micro-computers will provide the staff with the necessary tools to develop automated improvements. This level of funding will allow the financial management offices to provide basic financial services and maintain on-going financial management functions. The financial management offices will continue to provide accounting, payment processing, billings and collections for grants, travel, payroll, contracts, purchase orders, and all other financial transactions as well as payroll support and general ledger activities.

1990 Program

In 1990, the Agency is allocating a total of $3,458,500 supported by 89.5 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide the Regions with accounting, payment processing, payroll support, financial reporting services, and comprehensive financial management.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,179,000 supported by 90.2 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources, the Financial Management Offices provided accounting, payment processing, payroll support, financial reporting services, and comprehensive financial management.

HUMAN RESOURCES MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $4,487,600 supported by 103.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $706,200 and 10.0 total workyears from 1990. The increase in Salaries and Expenses will provide for anticipated salary and expense needs for FY 1991 and more fully address shortfalls in this account which have existed the past few years. The increase in workyears will support the Clean Air Act by providing for basic personnel operations and enhancing human resources programs in the Regions. The resources will allow Regional personnel offices to meet basic regulatory requirements and maintain current service levels. These services include processing recruitment and classification actions, entering data and updates to the Agency's payroll system, providing advisory services and reorganization reviews, administering the grievance system, negotiating with unions, and managing the Performance Management and Recognition System.

1990 Program

In 1990, the Agency is allocating a total of $3,781,400 supported by 93.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to formalize local human resource management programs, provide for recruitment, staffing, and classification actions, conduct position management and pay administration, process personnel and payroll transactions, administer grievance system and disciplinary action procedures, provide employment development and training, consult and negotiate with local unions, conduct special studies, and advise Regional managers on the above functions.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,836,200 supported by 100.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources, the Regional personnel offices provided on-going personnel services to support the accomplishment of the Regions' program operations and goals, provided better training programs for Regional employees, and initiated human resources management programs.

ADMINISTRATIVE MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $9,050,000 supported by 209.8 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $1,325,200 and 20.8 total workyears from 1990. The increase in Salaries and Expenses will provide for anticipated salary and expense needs in FY 1991 and more fully address shortfalls in this account which have existed the past few years. Increased workyears will provide for enhanced health and safety and environmental compliance activities and expand data integration efforts to assist the Agency in more extensive cross-media analysis for better risk-based decisions. Resources will allow the Regions to provide administrative management services that include maintaining administrative information systems and minicomputer operations, ensuring ADP operations support for Regional programs, managing word processing equipment and ADP systems acquisition, and coordinating Regional records management. Development of state data management plans to ensure efficient and reliable methods of State/EPA data sharing will receive priority attention. In addition, this program will continue to direct contracting and purchasing activities, ensure the safety and security of Regional personnel, manage property and supplies, provide general office services, and provide program management for all support services.

1990 Program

In 1990, the Agency is allocating a total of $7,724,800 supported by 189.0 total workyears for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide the Regions with administrative management activities in the areas of information management, small purchases and procurement, health and safety and environmental compliance, and facilities support. This program will continue to improve methods for EPA and states to share environmental data.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,794,300 supported by 178.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. With these resources, the Regions provided administrative management services and implemented information management plans to increase use of personal computers and integrate electronic telecommunications lines to achieve cost saving and productivity gains.

REGIONAL MANAGEMENT

1991 Program Request

The Agency requests a total of $13,452,400 supported by 187.0 total workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $1,506,700 and a decrease of 5.3 workyears from 1990. The increase in Salaries and Expenses reflects increased personnel and support costs. The decrease in workyears reflects a 1990 FTE increase to process the backlog of FOI requests. The budget request will enable the Regional offices to continue to shape and articulate policy for state and local governments; respond to inquiries from Congress, the news media and the public; establish regular communications with public interest, environmental and business groups; maintain an effective Equal Employment Opportunity program, and process Freedom of Information requests.

1990 Program

In 1990, the Agency is allocating a total of $11,945,700 and 192.3 total workyears for this program, all of which is from the Salaries and Expenses appropriation. In 1990 we will emphasize coordination and dissemination of the increasing number of information requests including Freedom of Information requests, which are increasing by approximately 20 percent per year. The program will continue issuing critical news releases, maintaining a Regional Equal Employment program, responding to Congressional inquiries, and coordinating EPA involvement in major state environmental issues.

1989 Accomplishments

In 1989, the Agency obligated $12,213,600 and 205.7 total workyears for this program, all of which was from the Salaries and Expenses appropriation. This program provided support for the Regional Administrators and their immediate staffs, as well as for the basic staff functions of public affairs, Congressional and intergovernmental activities, and the equal employment opportunity function.

REGIONAL COUNSEL

1991 Program Request

The Agency requests a total of $5,031,300 supported by 93.0 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $1,341,800 and an increase of 10.1 total workyears from 1990. The increase will provide for additional staff to manage, conduct, and coordinate legal counseling and Agency litigation; to provide increased legal support to FOI requests; to provide for hearing officers for certain types of administrative hearings, and for increased personnel and support costs.

The Offices of Regional Counsel (ORC) will continue to handle defensive litigation involving principally Regional issues. They will provide advice and counsel to Regional programs; review Regional rulemaking actions; assist states by reviewing State program delegations and advising State agencies on obtaining adequate legal authorities; and support Agency contract and assistance programs through resolution of grant appeals, bid protests, and debarment and suspension actions. The additional attorney staff requested for 1991 will be used to bolster the ORC capacity to manage, conduct, and coordinate Agency Regional litigation and other actions to ensure that Agency receives timely, consistent, and comprehensive legal advice for all Regional programs and activities.

1990 Program

In 1990, the Agency is allocating a total of $3,689,500 supported by 82.9 total workyears for this program, all of which is from the Salaries and Expenses appropriation. The ORCs handle defensive litigation involving principally Regional issues. They provide advice and counsel to Regional programs; review Regional rulemaking actions; and assist States by reviewing State program delegations and advising State agencies on obtaining adequate legal authorities. Additionally, the ORCs continue to support Agency assistance and procurement programs through resolution of grant appeals, bid protest, and debarment and suspension actions.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,007,100 supported by 81.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation. In 1989, the ORCs supported Agency priorities by providing legal advice and support to Regional managers and defending the Agency in litigation. They also advised on actions such as grants, contracts, and personnel actions. Additionally, the ORCs activities including advising State agencies on the legal requirements for assuming environmental protection programs, assisting in drafting appropriate regulatory language, and helping to negotiate and document the terms of delegation agreements.

PLANNING, EVALUATION, AND ANALYSIS - REGIONS

1991 Program Request

The Agency requests a total of $5,227,300 supported by 101.5 total workyears for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $885,800 and an increase of 10.7 total workyears from 1990. The increase in Salaries and Expenses results from expanded efforts in pollution prevention and strategic planning and increased personnel and support costs as well as the one-time reduction in 1990 associated with sequestration and Section 517.

The ten Regions will carry out essential Regional planning, evaluation and analysis activities including strategic planning focussing on comparative risk analyses and development of Regional strategic options; accountability; program evaluation; management and regulatory analysis; and risk assessment, management and communication which will focus on developing and implementing comprehensive Regional risk reduction strategies to establish the necessary institutional framework for addressing risk in the field. In addition, these resources will provide all Regions with the staff needed to perform activities related to cross-media pollution prevention. Products will include implementation of Regional pollution prevention plans; integration of pollution prevention and source reduction approaches in site-specific decision making; sponsoring training and education events for state and local governments, industry and citizen groups; overseeing pollution prevention state grant activities; integrating pollution prevention into Regional risk management strategies; and supporting multi-state, Regional councils, established specifically to deal with pollution prevention and source reduction initiatives.

1990 Program

In 1990, the Agency is allocating a total of $4,341,500 supported by 90.8 total workyears for this program, all of which is from the Salaries and Expenses appropriation.

These resources are providing the ten Regional Administrators with the staff needed to perform essential planning, evaluation, and analysis activities. In addition, each Region continues to develop an overall strategy for improving the use of risk analysis in its decision making by continuing to work with the Office of Policy, Planning and Evaluation (OPPE) in building priority-setting and planning processes and in improving the ability to set priorities based on risk reduction; increasing the scientific and technical risk capability in each Region; initiating programs to facilitate information exchange among state environmental agencies on new technical and management applications; developing new methods to explain environmental risks to the public; and identifying specific training needs and sponsoring classes for employees in risk-related analytical techniques. Three Regions are working with OPPE in developing Regional risk plans as part of the four-year strategic planning process. Additionally, six Regions are establishing Regional pollution prevention demonstration programs. These cross-media programs support work at the state level by providing technical assistance, training opportunities and support to Regional, multi-state advisory councils. Several Regions are sponsoring projects which are targeting pollution prevention opportunities for key industrial facilities in sensitive environmental areas, and another of the demonstration Regions is integrating pollution prevention approaches into its enforcement priority-setting efforts. Evaluations of these efforts are underway.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,817,600 supported by 81.0 total workyears for this program, all of which was from the Salaries and Expenses appropriation.

Necessary planning, evaluation and analysis functions were performed. Three Regions participated in OPPE's Regional integrated environmental management projects. All Regions devoted additional resources to beginning the development of comprehensive Regional risk reduction strategies to establish the necessary institutional framework for addressing risk assessment, management, and communication. First steps involved examining the Regions' priority-setting process, developing a more objective means of setting priorities (including use of Geographic Information System technologies) and establishing a process for increased Regional participation in developing Agency priorities and assessing Regional risk reduction efforts. Six Regions also began to lay the foundation for pollution prevention demonstration programs.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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SUPPORT COSTS

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Professional Training						
Salaries & Expenses		$467.1	$582.6	$574.8	$1,130.0	$555.2
	TOTAL	$467.1	$582.6	$574.8	$1,130.0	$555.2
Nationwide Support Services						
Salaries & Expenses		$73,700.8	$81,969.5	$79,820.2	$89,469.8	$9,649.6
Office of Inspector General				-	$1,702.0	$1,702.0
	TOTAL	$73,700.8	$81,969.5	$79,820.2	$91,171.8	$11,351.6
Headquarters Support Services						
Salaries & Expenses		$37,657.7	$47,435.8	$46,726.6	$56,576.2	$9,849.6
Office of Inspector General					$610.0	$610.0
	TOTAL	$37,657.7	$47,435.8	$46,726.6	$57,186.2	$10,459.6
Regional Support Services						
Salaries & Expenses		$34,096.7	$37,980.5	$31,800.5	$42,037.6	$10,237.1
	TOTAL	$34,096.7	$37,980.5	$31,800.5	$42,037.6	$10,237.1
Automated Data Processing Support Costs						
Salaries & Expenses		$35,832.2	$43,053.0	$42,236.7	$47,749.6	$5,512.9
Office of Inspector General					$130.0	$130.0
	TOTAL	$35,832.2	$43,053.0	$42,236.7	$47,879.6	$5,642.9
Lab Support-Research & Development						
Salaries & Expenses		$6,932.3	$9,486.7	$8,120.0	$8,444.2	$324.2
	TOTAL	$6,932.3	$9,486.7	$8,120.0	$8,444.2	$324.2
Lab Support - Air And Radiation						
Salaries & Expenses		$1,846.5	$1,923.0	$1,858.1	$1,953.3	$95.2
	TOTAL	$1,846.5	$1,923.0	$1,858.1	$1,953.3	$95.2
Lab Support - Pesticides & Toxic Substances						
Salaries & Expenses		$366.0	$466.7	$460.4	$474.0	$13.6
	TOTAL	$366.0	$466.7	$460.4	$474.0	$13.6
TOTAL:						
Salaries & Expenses		$190,899.3	$222,897.8	$211,597.3	$247,834.7	$36,237.4
Office of Inspector General					$2,442.0	$2,442.0
Support Costs	TOTAL	$190,899.3	$222,897.8	$211,597.3	$250,276.7	$38,679.4

MANAGEMENT AND SUPPORT

Support Costs

Budget Request

The Agency requests a total of $250,276,700 for 1991, an increase of $38,679,400 from 1990. All of the request is for the Salaries and Expenses appropriation.

PROFESSIONAL TRAINING

1991 Program Request

The Agency requests a total of $1,130,000 for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $555,200 from 1990. The increase will enhance current training and development programs as well as support human resources management initiatives especially in the areas of expanding technology transfer to state, local and tribal governments. We will also establish a centrally funded management training pool for an Agency-wide executive development program. The Agency will continue to offer training and development to managers and support staff. Scientific and technical courses will be developed. The EPA Institute will add to its current offerings. Career development activities will be enhanced in order to help employees develop and maintain needed skills.

1990 Program

In 1990, the Agency is allocating a total of $574,800 for this program, all of which is from the Salaries and Expenses appropriation. These funds are being used to develop and deliver a widening variety of training opportunities through the EPA Institute and will increase the number of employees trained to conduct these courses. Institute courses Agency-wide will be consolidated into an automated courses catalogue. The Agency will emphasize Regional Institute activities, especially those involving transfer of technology to states and tribal communities. EPA will continue to conduct supervisory and managerial training courses including "Framework for Supervision", "Keys to Managerial Excellence", and "Managing for Results" and will implement "A Core Course for Executives". In addition, we will develop programs to augment these core managerial courses. Career development programs will be supported which increase the cross-agency and cross-media experience of employees and managers, and improve their ability to address complex environmental problems. Current activities of the Senior Executive Service (SES) Candidate Development Program, the Presidential Management Intern Program and the Greater Leadership Opportunities Program will be maintained. The Agency will continue to support the career advisory committees and the Human Resources Council.

1989 Accomplishments

In 1989, the Agency obligated a total of $467,100 for this program, all of which was from the Salaries and Expenses appropriation. These funds were utilized to provide training in the areas of supervisory management, executive development, clerical skills, and technical and scientific development. EPA Institute operations were expanded to Regions and field locations. The Agency developed a pre-supervisory training program, a "Core Course for Executives" and expanded the Greater Leadership Opportunities Program (GLO), a program targeted at helping women and minorities to advance.

NATIONWIDE SUPPORT SERVICES

1991 Program Request

The Agency requests a total of $91,171,800 for this program. Total dollars will include $89,469,800 for the Salaries and Expenses appropriation and $1,702,000 for the Inspector General appropriation. This represents an increase of $9,649,600 in the Salaries and Expenses appropriation and $1,702,000 in the Inspector General appropriation from 1990. The increase will cover additional space rental and telecommunications needs as a result of Agency workyear increases, FTS rate increases and cost escalations to service contracts. These funds will pay for Agencywide support costs including space rental, postage, FTS and telecommunications costs, national security, Code of Federal regulations typesetting, unemployment compensation, workmen's compensation, health and safety and environmental compliance audits and personnel support for Public Health Service commissioned officers.

1990 Program

In 1990, the Agency is allocating a total of $79,820,200 for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used by the Agency to provide efficient nationwide services to the Agency workforce. The Agency is working with GSA to procure additional space in Washington to help alleviate overcrowded conditions at the Waterside Mall.

1989 Accomplishments

In 1989, the Agency obligated a total of $73,700,800 for this program, all of which was from the Salaries and Expenses appropriation. These resources allowed the Agency to pursue several nationwide support efforts in the areas of space planning, telecommunications, information security, and personal property management.

HEADQUARTERS SUPPORT SERVICES

1991 Program Request

The Agency requests a total of $57,186,200 for this program. Total dollars include $56,576,200 for the Salaries and Expenses appropriation and $610,000 for the Inspector General appropriation. This represents an increase of $9,849,600 in the Salaries and Expenses appropriation and $610,000 in the Inspector General appropriation. The increase will provide for cost escalations to service contracts, cover anticipated utility rate increases and provide support for Agency workyear increases. It also includes a major initiative to support data management activities which will provide for data integration and the sharing of information with state and local governments. The data integration efforts will support the Agency emphasis on compliance, enforcement, and pollution prevention strategies. These resources will provide space planning and coordination services for the new Headquarters facility. These resources will also provide ongoing Headquarters Support services including motor pool, printing and copying, telephones, utilities, facilities operations and maintenance (specifically the needs associated with the Waterside Mall Complex), and ADP technical support to EPA operations in Washington, Research Triangle Park (RTP), North Carolina, and Cincinnati, Ohio.

1990 Program

In 1990, the Agency is allocating a total of $46,726,600 for this program, all of which is from the Salaries and Expenses appropriation. These resources are being used to provide on-going office, building, and information management services to EPA operations in Washington, RTP, and Cincinnati. With this funding level the Agency will provide critical on-going services necessary to operate and manage EPA facilities, office supply/support services, and management information systems. Additionally, the Agency will continue to carry out its operating plans for delegation of authority for lease enforcement/building operations at headquarters facilities, and will continue to refine procedures for property management/inventory control. We will continue to plan for the new Headquarters facility and focus on refinement of design characteristics. In addition we are expanding our facility improvement efforts at the Waterside Mall Complex.

1989 Accomplishments

In 1989, the Agency obligated a total of $37,657,700 for this program, all of which was from the Salaries and Expenses appropriation. These resources provided basic Headquarters Support services to EPA operations in Washington, RTP, and Cincinnati. In addition, detailed technical requirements, evaluation criteria, and site analysis information was performed in preparation for the new Headquarters facility. ADP support was provided for the first phase of the Integrated Financial Management System. This system was implemented Agency-wide providing integrated financial services and internal funds control. The program systems modernization efforts were begun to enhance and develop national data systems.

REGIONAL SUPPORT SERVICES

1991 Program Request

The Agency requests a total of $42,037,600 for this program, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $10,237,100 from 1990. The increase will allow for contract and rate increases in basic operating costs, provide for health and safety and environmental compliance contract support, and provide for the acquisition of ADP equipment to meet information management needs. Increased resources will more fully address shortfalls in this account which have existed in the past, and provide support needs for additional Agency workyears. This level of resources will provide the ten Regional Offices with basic support services including printing and copying, minicomputer operations, utilities, mail, telephone, library operations, general training, office and laboratory facility maintenance, and technical support. In addition, funding is provided to pay for the relocation of the Chicago, San Francisco, and Boston offices.

1990 Program

In 1990, the Agency is allocating a total of $31,800,500 for this program all of which is from the Salaries and Expenses appropriation. These resources are being used to provide basic office, building, and information management services to the Regions. In addition, funding is provided to pay for the relocation of the San Francisco and Boston offices.

1989 Accomplishments

In 1989, the Agency obligated a total of $34,096,700 for this program, all of which was from the Salaries and Expenses appropriation. These funds provided ongoing support services in the Regions including improved property management and better safety for EPA employees. Also, the Regions continued efforts to increase Regional productivity.

AUTOMATED DATA PROCESSING SUPPORT COSTS

1991 Program Request

The Agency requests a total of $47,879,600 for this program, $47,749,600 of which will be for the Salaries and Expenses appropriation and $130,000 from the Inspector General appropriation. This represents an increase of $5,512,900 in the Salaries and Expenses appropriation and $130,000 in the Inspector General appropriation. This increase will enable the Agency to allow for increased timeshare capacity to meet additional program and administrative needs. These resources will provide the mainframe computing capacity, telecommunications network, workstation support and operations to support the access and use of environmental and management data.

1990 Program

The Agency is allocating a total of $42,236,700, all of which is from the Salaries and Expenses appropriation. These funds are being used to maintain an ever-increasing demand on computing services in support of all Agency programs, exclusive of Superfund. The Agency's mainframe computing resources are expanding to meet the increased use by the Agency and states in environmental data collection, use and sharing. The integration of our administrative systems have also increased the demand for mainframe computing capacity. The Agency is also beginning to implement a more open telecommunications architecture centered around current communications standards.

1989 Accomplishments

In 1989, The Agency obligated a total of $35,832,200, all of which was from the Salaries and Expenses appropriation. The Agency used these funds to maintain and operate its mainframe computing systems, continued the replacement of obsolete minicomputers in the Agency's Regional Offices with modern processors that are compatible with the Agency's mainframe and telecommunications architecture, continued the implementation of telecommunications connections to state/local environmental agencies to facilitate data sharing, implemented intra-building telecommunications backbones to support local area networking, and began investments in visualization equipment in support of supercomputer modeling research. The Agency continued to invest in increased computing capacity to support programmatic and administrative computer applications. Investments were also made in the wide area network to implement increased capacity and to respond to government-wide standards.

LAB SUPPORT RESEARCH AND DEVELOPMENT

1991 Program Request

The Agency requests a total of $8,444,200, all of which will be for the Salaries and Expenses appropriation. This represents an increase of $324,200 from 1990 to prevent major health, safety or environmental compliance problems that would result from inadequate maintenance of facilities. Many of these laboratories have deteriorated and constantly require attention.

ORD's seven remote laboratories are located in:

- Athens, Georgia
- Ada, Oklahoma
- Corvallis, Oregon
- Duluth, Minnesota
- Narragansett, Rhode Island
- Gulf Breeze, Florida and
- Las Vegas, Nevada

Essential services required to operate and maintain ORD,s seven remote laboratories include, but are not limited to, facilities operation and maintenance; janitorial and guard services; local telephone services; utilities; and equipment operations, maintenance and rental costs.

1990 Program

In 1990, the Agency is allocating a total of $8,120,000, all of which is from the Salaries and Expenses appropriation. This program provides funds for the operation and maintenance of ORD's seven remote laboratories.

1989 Accomplishments

The Agency obligated $6,932,300, all of which was from the Salaries and Expenses appropriation. These funds provided for the operation and maintenance of remote laboratories.

LAB SUPPORT - AIR AND RADIATION

1991 Program Request

The Agency requests a total of $1,953,300 for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of $95,200 from 1990. This program supports the Motor Vehicle Emissions Laboratory (MVEL) in Ann Arbor, Michigan; the Eastern Environmental Radiation Facility (EERF) in Montgomery, Alabama; and the Las Vegas radiation facility (LVF) in Nevada. The funds provide basic operation and maintenance support at these locations. The support provided includes security, janitorial, and maintenance services; utilities; General Services Administration vehicles; supplies and materials; and communications.

1990 Program

In 1990 the Agency is allocating $1,858,100 to support the three laboratories, all from the Salaries and Expenses appropriation. The 1990 program provides for the same types of activities described for 1991: basic laboratory operations, maintenance, and supplies. These activities are required on a continuing basis for effective and safe laboratory operation.

1989 Accomplishments

In 1989 the Agency obligated a total of $1,846,500 for this program, all of which was from the Salaries and Expenses appropriation. These funds provided the basic facilities operations and maintenance costs necessary to operate the three laboratories.

LAB SUPPORT - PESTICIDES AND TOXIC SUBSTANCES

1991 Program Request

The Agency requests a total of $474,000 for this program, all of which will be for the Salaries and Expenses appropriation. This is an increase of $13,600 over the 1990 funding level. Resources will be used for basic facilities and operation and maintenance costs for the laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi. These costs include utilities, security, communications, warehousing, custodial services, and building maintenance. These resources will also provide for the purchase of new laboratory equipment to replace equipment which is obsolete or no longer cost-effective to repair, and cover increasing maintenance costs for existing equipment. The resources will also provide for the purchase of equipment for building analytical capacity for biotechnology and other unique products which cannot be validated with traditional laboratory instruments.

1990 Program

In 1990, the Agency is allocating a total of $460,400 for this program, all of which is from the Salaries and Expenses appropriation. The 1990 program supports the facilities, operations, and maintenance costs for the laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi. These costs include utilities, security, communications, warehousing, custodian services, building maintenance, purchase of new laboratory equipment to replace equipment which is obsolete or no longer cost-effective to repair, equipment maintenance, building biotechnology capacity, and analyzing unique products which cannot be validated with traditional analytical laboratory instruments.

1989 Accomplishments

In 1989, the Agency obligated a total of $366,000 for this program, all of which was from the Salaries and Expenses appropriation. The funds were used to provide general support and maintenance of the laboratories.

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BUILDINGS AND FACILITIES

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
APPROPRIATION	$6,592.7	$14,768.0	$14,652.0	$13,000.0	-$1,652.0
OUTLAYS	$15,118.0	$19,543.0	$19,436.0	$12,942.0	-$6,494.0
AUTHORIZATION	Authorization is by virtue of the Appropriation Act.				

BUILDINGS AND FACILITIES

OVERVIEW AND STRATEGY

The Building and Facilities appropriation funds the design, construction, and improvement of all types of facilities occupied by EPA. The agency currently has ten Regional offices with associated Regional laboratories, two large research and development laboratories, a number of field stations with laboratory facilities, and a large headquarters complex.

The Building and Facilities mandate is to provide a healthful and efficient work environment through repair, renovation upgrades, or replacement of our facilities. We are currently directing major efforts toward finding suitable housing for EPA headquarters and are simultaneously continuing a repair program that protects the investment in EPA's real property holdings and permits us to more adequately and efficiently address Agency programs. When necessary, we provide specially designed laboratories and testing facilities to meet particular environmental program needs. We place particular emphasis on environmental compliance efforts in EPA facilities where modifications are needed to accommodate storage of hazardous materials, removal of asbestos and PCBs, upgrading fire and life safety systems (such as installation of sprinkler and detection systems and the removal of Halon systems), and renovating HVAC systems to meet ventilation standards. A constant theme in all of our efforts is to provide environmental leadership in protecting our employees so that we might serve as a role model for both the public and private sectors of society.

BUILDINGS AND FACILITIES

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
New Facilities						
Buildings & Facilities		$1,561.1	$4,430.4	$4,395.6	$500.0	-$3,895.6
	TOTAL	$1,561.1	$4,430.4	$4,395.6	$500.0	-$3,895.6
Repairs & Improvements						
Buildings & Facilities		$5,031.6	$10,337.6	$10,256.4	$12,500.0	$2,243.6
	TOTAL	$5,031.6	$10,337.6	$10,256.4	$12,500.0	$2,243.6
TOTAL:						
Buildings & Facilities		$6,592.7	$14,768.0	$14,652.0	$13,000.0	-$1,652.0

BUILDINGS AND FACILITIES

Budget Request

The Agency requests $13,000,000 for the Buildings and Facilities appropriation, a decrease of $1,652,000 from 1990. This decrease is the result of a significant decrease in New Facilities funds described below.

NEW FACILITIES

1991 Program Request

The Agency requests a total of $500,000 for this program, all of which will be for the Building and Facilities appropriation. This represents a decrease of $3,895,600 from 1990. The 1990 appropriation had been increased by a Congressional add-on of $3 million for the Las Vegas laboratory and a second add-on of $1 million for the Ada, Oklahoma laboratory. The 1990 funds were also affected by across-the-board cuts of $105,000. The 1991 request will provide funds to design and construct daycare facilities.

1990 Program

In 1990, the Agency is allocating $4,395,600 for this program, all of which is from the Buildings and Facilities appropriation. These funds are being used to construct a new water quality monitoring field station and support construction activities in Newport, Oregon; design and renovate a laboratory to test and evaluate innovative hazardous waste treatment technologies in Edison, New Jersey; complete the design for a Clinical Inhalation Research Laboratory at Chapel Hill, North Carolina; design and complete construction of a Day Care Center in Cincinnati, Ohio; and finish construction of a radiation laboratory in Montgomery, Alabama; and complete design and begin construction of the new biotechnology lab in Gulf Breeze, Florida.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,561,100 for this program, all of which was carryover from the Buildings and Facilities appropriation. These funds were used to start construction on a new water quality monitoring field station in Newport, Oregon, and to design a lab for clinical inhalation research in Chapel Hill, North Carolina. In addition, we initiated the design on the new biotechnology lab in Gulf Breeze, Florida and continued the design on the Superfund Lab in Edison, New Jersey. Construction continued on the new radiation lab in Montgomery, Alabama.

REPAIRS AND IMPROVEMENTS

1991 Program Request

The Agency requests a total of $12,500,000 for this program, all of which will be for the Buildings and Facilities appropriation. This represents an increase of $2,243,600 from 1990. The increase will be used for health and safety and environmental compliance projects and will fund build-out costs associated with Regional office moves. These funds will provide planning, engineering design, and construction related to the repair and improvement of buildings occupied by EPA. More specifically, these funds will be used to improve working conditions at the Waterside Mall Complex, address critical repairs related to employee health and safety (fire protection installation); environmental compliance efforts in EPA facilities (asbestos removal and hazardous materials storage); critical regional build-out costs of space associated with the moves of Chicago, San Francisco, and Boston; the expansion of the New York office; and required alterations and repairs (electrical distribution, air conditioning, emergency power for animal facilities).

1990 Program

In 1990, the Agency is allocating a total of $10,256,400 for this program all of which is from the Buildings and Facilities appropriation. These resources are being used primarily to provide facilities maintenance and repair in an effort to prevent further deterioration of EPA facilities, particularly at Waterside Mall; to initiate environmental compliance activities such as asbestos removal and upgrading of an incinerator in RTP; to complete Underground Storage Tank (UST) activities; and to continue health and safety improvements and modifications to facilities, including fume hoods and critical HVAC upgrades and upgraded space requirements associated with the moves of San Francisco and the Boston Regional offices as well as critical Health and Safety related Headquarters activities.

1989 Accomplishments

In 1989, the Agency obligated a total of $5,031,600, all of which was from the Buildings and Facilities appropriation. These resources were used to complete various health and safety and environmental compliance improvements to protect EPA employees and provide routine and emergency repairs at multiple sites throughout the nation.

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Construction Grants 13-1

CONSTRUCTION GRANTS

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
APPROPRIATION	$2,531,237.0	$2,018,225.0	$1,991,720.0	$1,600,000.0	-$391,720.0
OUTLAYS	$2,349,827.0	$2,363,092.0	$2,362,668.0	$2,338,857.0	-$23,811.0
AUTHORIZATION LEVELS	The Water Quality Act of 1987 reauthorized this program at a level of $2,400,000,000 for each year 1987 through 1991.				

CONSTRUCTION GRANTS

OVERVIEW AND STRATEGY

Program Background

Since 1973 the construction grants program has completed about 7,000 construction projects and provided approximately $52 billion of the more than $77 billion invested in grant-assisted wastewater treatment works. There are currently about 15,600 treatment plants in the nation serving 176 million people.

This program has been authorized since 1972 through Title II of the Clean Water Act. Legislative amendments in 1977, 1981 and 1987 made a number of significant changes to the program which reduced the Federal role in financing project grants and increased state responsibilities for direct grants management. The statute provides a formula for annual allotment of funds to states and contains authorities for various funding set-asides to support delegated state management, water quality management planning, innovative and alternative technologies, and rural communities.

Program Transition

The Water Quality Act of 1987 set the stage for significant program changes. The traditional program of grants to communities for constructing facilities is being replaced by grants to states to capitalize revolving loan funds ushering in expanded state responsibilities and autonomy in an already extensively delegated program. Forty-three SRF programs came on line through 1989 with seven new programs projected in 1990, resulting in 50 operational programs in 1991.

Another key change brought by the 1987 amendments was the creation of several programs based on set-asides from construction grants (Title II) funds. These include national reserves for Indian tribe wastewater treatment grants, marine combined sewer overflow grants, funding for the national estuary program and funding for nonpoint source programs. The set-asides have provided significant financial support to these activities; however, they will end with the final appropriation of Title II funds in 1990.

Program Completion

Although funding for construction grants ends in 1990, a significant workload of active grant projects will require state and Federal management well into the 1990. By 1991, over 4,800 active grant projects, representing over $25 billion in Federal investment, will require ongoing management. Projects not yet closed out in 1991 represent 26 percent of all construction grants ever made and 60 percent of the total Federal investment.

EPA is developing a strategy to deal with the completion of the program as 205(g) program grant funds are phased out. The strategy will be based on the ongoing partnership among EPA offices (including the Inspector General and Regions), the Corps of Engineers and the state agencies, and will identify the necessary level and mix of program resources to handle the completion workload.

CONSTRUCTION GRANTS

Construction Grants and State Revolving Funds

Budget Request

The Agency requests a total of $1,600,000 for the Construction Grants Appropriation, a decrease of $391,720,000 in the total appropriation from 1990. Since 1990 is the final year the Agency is authorized to award grants to localities for constructing sewage treatment plants, the entire 1991 request will be devoted to capitalizing State Revolving Funds (SRF). Thus, funding for SRF's will increase $598 million over that appropriated for 1990. 1991 is the first year of accelerated SRF funding. The goal is that SRFs will be adequately capitalized when the federal contribution ends no later than 1994. With sufficiently funded SRFs, state wastewater treatment plant construction programs will be self sufficient.

CONSTRUCTION GRANTS

1991 Program Request

The Agency's request of $1,600,000,000 for the Construction Grants appropriation will be entirely devoted to the SRF program. This level of funding will enable the Agency to assist in capitalizing the SRF programs and ensure that states can provide financial assistance for construction of the highest priority wastewater treatment facilities needed by communities to comply with Clean Water Act requirements.

The Agency requests that $15,700,000 be earmarked for an international sewage treatment project authorized by Section 510 of the Water Quality Act of 1987. Funds will be available for the construction of treatment facilities to treat Tijuana sewage only if Mexico agrees to finance all operations and maintenance costs attributable to Mexican sewage treated at the international plant as well as the construction of any future additional capacity necessary to treat Tijuana sewage.

Gross obligations for the construction grants program will total approximately $209,000,000 from carryover and deobligated funds; gross obligations for the SRF program will total approximately $1,488,930,000. Net outlays are projected to be $1,397,928,000 for construction grants and $940,930,000 for the SRF program.

Fifty SRF programs will be operating in 1991. Since the final appropriation for construction grants ended in 1990, a total of 89 new construction grants awards will be made from carryover and deobligated construction grants funds, resulting in a total active workload of approximately 4,800 construction grants projects at the end of 1991. Funding for the Indian grants set-aside under Title II will remain available until expended. Making use of provisions under the SRF program, states will have greater flexibility to use funds for nonpoint source, ground-water and estuary programs after they have addressed first use requirements for National Municipal Policy projects. The Section 604(b) set-aside for water quality management activities under Title VI will continue.

1990 Program

In 1990, the Agency is allocating a total of $1,991,720,000 from the Construction Grants appropriation, which is evenly distributed between the construction grants and SRF programs. The 1990 construction grants appropriation includes $46,000,000 stipulated for Section V projects in Boston Harbor, Tijuana and Des Moines.

Gross obligations for the construction grants program will total approximately $765,817,000 and approximately $1,539,416,000 for the SRF program. Net outlays will be approximately $1,836,934,000 for construction grants and $525,734,000 for the SRF program. The 1990 funding level will result in a total of 339 Title II grant awards and a total active workload of approximately 5,500 construction grants projects at the end of 1990. Section 205(g) management assistance grants will continue to be a major source of funding for state management of construction grants activities. The Agency is continuing to work with states to establish plans to complete the construction grants program. Funds under 518(c) will continue to be reserved for grants for the design and construction of wastewater treatment works on Indian reservations.

1989 Accomplishments

In 1989, gross obligations totaled $1,389,237,300 for construction grants and $1,142,000,000 for the SRF program. This funding supported 402 Title II grant awards and resulted in a total active workload of 6,095 grant projects at the end of 1989. Federal outlays totaled $2,186,826,836 for construction grants and $163,000,000 for the SRF program. States obligated $49,700,000 under 205(g) for management of delegated construction grants projects.

The 1989 Construction Grants appropriation included $68,000,000 which Congress stipulated for Boston Harbor ($25,000,000), Des Moines ($20,000,000), Tijuana ($20,000,000), and Oakwood Beach/Red Hook ($3,000,000) projects. Authorizations for these activities are contained in Sections 513, 515, 510 and 512, respectively, of the Water Quality Act of 1987. The Agency worked with the affected jurisdictions to develop plans for the use of these funds consistent with their authorized purposes.

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SUPERFUND

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Office of Inspector General	$6,612.3	$10,156.9	$10,057.9	$13,106.4	$3,048.5
Hazardous Substance Superfund	1537,052.0	1550,588.1	1530,228.1	1740,000.0	209,771.9
TOTAL, Superfund	1543,664.3	1560,745.0	1540,286.0	1753,106.4	212,820.4
PERMANENT WORKYEARS	2,621.5	3,035.0	3,413.5	3,552.0	138.5
TOTAL WORKYEARS	2,799.4	3,535.0	3,535.0	3,552.0	17.0
OUTLAYS	958,195.0	1334,907.0	1330,631.0	1530,771.0	200,080.0
AUTHORIZATION LEVELS	The Superfund Amendments and Reauthorization Act (SARA) of 1986 authorizes a total of $8,500,000,000 for this program for 1987 through 1991.				

SUPERFUND MEDIA OVERVIEW

OVERVIEW AND STRATEGY

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), charges the Agency with the responsibility of providing emergency response for hazardous substances released into the environment and the remediation of inactive hazardous waste disposal sites. The Hazardous Substance Superfund finances the required activities to implement CERCLA primarily through taxes levied on oil and chemical manufacturers, a chemical feed stock tax, a corporate environmental tax, and general revenues.

The Agency will respond to releases of hazardous substances, pollutants, and contaminants by either compelling potentially responsible parties (PRPs) to undertake the response action or by conducting a removal or remedial action. Removal actions are generally short-term responses taken to abate an immediate threat posed by the uncontrolled release of hazardous substances. Remedial actions involve long-term and more permanent remedies taken instead of, or in addition to, removal actions. The program will continue to select sites for remedial action from the National Priorities List (NPL) and to undertake all response actions in accordance with the National Contingency Plan.

While the Agency has the primary responsibility for implementing the program, CERCLA, Executive Order 12580, and SARA provide a clear mandate for the Agency to work closely with a variety of other Federal agencies and the States to carry out the Act. The Agency undertakes five major activities in implementing the Superfund program: Enforcement, Hazardous Substance Response, Interagency Support, Research and Development, and Management and Support. The effective implementation of these activities involves close cooperation among various Agency offices, the states, and other Federal agencies.

Enforcement-First Budget

The Agency's primary strategy is devoted to ensuring that PRPs respond to environmental threats. This strategy involves efforts to identify PRPs in the initial stages of site remediation. Through negotiated administrative settlements for pre-remedial actions and settlements embodied in a Consent Decree for remedial design and construction, the Agency will attempt to maximize PRP response.

Where negotiations are unsuccessful, unilateral administrative orders are issued to allow for treble damage claims if a Fund-financed response is required. In some cases, a CERCLA Section 106 judicial action is undertaken to compel a privately-financed response. In cases where PRPs do not respond in a timely manner to requests for information, enforcement actions are taken. PRP responses resulting from settlements and judgments will be managed, implemented, and monitored for compliance and, where necessary, stipulated penalties will be invoked. Throughout the stage prior to remedy selection, efforts will continue to identify additional PRPs. Non-settlers will be vigorously pursued for cost recovery, with the focus on cases subject to a statute of limitation deadline.

The Agency will enter into agreements with the states to encourage their active involvement in the Superfund program. Through these agreements, the Agency will provide technical assistance as the states compel PRP response under state authorities and oversee privately funded response actions. The enforcement program will also provide oversight of response and technical assistance to other Federal agencies that are addressing uncontrolled hazardous sites at facilities owned or operated by that agency.

Response Actions Address Environmental Threats

The response program addresses two major goals: 1) to stabilize actual or potential threats from releases of hazardous substances; and 2) to ensure that environmental threats posed by uncontrolled hazardous waste sites are addressed quickly and effectively.

The emphasis in 1991 will be to continue the shift to greater involvement of PRPs in the response cleanup process. Growth in the response program will occur as the Agency practices sound management within a finite budget. The importance of several broad management systems and principles is emphasized to provide for the effective and efficient use of resources. These include: Integrated Remedial Action Timeline establishes clear goals for the timing of enforcement decisions and identifies critical points at which actions must be taken; Integrated Priority-Setting Matrix allows for systematic method of allocating and funding resources according to Agency priorities; and Site/Case Management Planning Process ensures that a site strategy is developed, agreed to by managers, and carried out. Funding the most environmentally significant projects first, while maintaining a balance of statutorily required actions and highly visible ongoing projects and completions that build public confidence, will also continue as a program goal.

EPA will continue to place an emphasis on preference for treatment technologies and permanent remedies. Ranking factors will continue to be used to prioritize construction projects currently funded by the Trust Fund. These factors are based on protecting human health as the highest priority, and mitigating actual threats to sensitive ecosystems and endangered species. The priority ranking of a construction project increases as the risk occurs closer in time. In addition, EPA will continue to focus its removal actions on "classical emergencies" or time-critical responses where there is no PRP, state, or local alternative. A lack of action on the Agency's part in these situations could result in substantial harm to the public health and/or the environment. Continued emphasis will be placed on greater state, Indian Tribe, and local participation in all areas of emergency response.

Activities complementary to direct response actions will also be supported. The Agency's Environmental Response Team will continue to provide training and technical support to the Agency, state, and local government personnel. The Agency will continue to operate a system for collecting comprehensive national notification and response data on accidental releases of oil and hazardous substances. Emphasis will continue on the transfer of research and other technical information among decision makers, with emphasis on the transfer of information concerning alternative technologies to land disposal.

To ensure that Superfund response activities do not result in radiation hazards or diminished air and water quality, the Office of Air and Radiation and the Office of Water will continue to provide laboratory analyses, technical assistance, and guidance to these efforts.

Special Expertise

The Agency integrates the efforts of the Departments of Health and Human Services, Justice, Transportation, Commerce, Interior, Labor, and the Federal Emergency Management Agency (FEMA) as part of our requirement for SARA. In this capacity, EPA manages an interagency budget process under Executive Order 12580, signed by the President in January 1987. The activities of other Federal agencies are divided into two basic categories. The first category includes those activities which are episodic in nature and taken in direct support of specific site or spill response actions. The second category of other Federal agency involvement is support for on-going activities which are generally not incident-specific. These activities include developing program policies and guidance, conducting health research, training response personnel, litigating civil and criminal cases, and providing scientific and technical advice to EPA on-scene coordinators.

The Department of Health and Human Services provides the largest supporting element to Superfund activities through the work of the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Environmental Health Sciences (NIEHS). ATSDR will: 1) provide health assessments at NPL and non-NPL sites; 2) enhance and maintain toxicology data bases for chemicals found at sites; and 3) provide health consultations for emergency responses. NIEHS will continue its basic research grant program of conducting biomedical studies investigating new and unique methodologies to measure levels of exposure and its effects on humans and will continue the grant program for training workers at hazardous waste sites.

Other Federal agencies will provide support for EPA as follows: the Department of Justice will conduct litigation and provide legal advice to achieve responsible party actions or cost recovery; FEMA will support permanent and temporary relocation operations; and the U.S. Coast Guard will respond to spills of hazardous substances in the coastal zone and Great Lakes waters and will maintain the National Response Center. The agencies together enable EPA to carry out an aggressive enforcement effort to respond more effectively and efficiently to emergencies and long-term response actions.

Continuing Research

The Superfund Research program will support the Agency, states, and industry in resolving technical problems which inhibit the effective implementation of removal and remedial actions at Superfund sites. Research will continue on alternative treatment technologies for use in cleanup actions under the Superfund Innovative Technology Evaluation program, evaluating naturally occurring or improved microorganisms (biosystems) for their ability to degrade hazardous substances, and technical support to Regions and states for ground water modeling, sampling, and testing techniques.

Ensuring Integrity of Trust Fund

The Agency will continue to decentralize the Superfund Contracting program by placing the balance of Regional contracting officers in the field. This will provide greater assurances that site-specific contracting needs are effectively addressed. Likewise, the Agency will place Superfund Grants management personnel in the Regions to manage and oversee Superfund Cooperative and Interagency Agreements, and Technical Assistance Grants. The Agency will also continue to increase its efforts to combat fraud, waste, and abuse in Superfund Federal assistance and procurement programs.

Financial management services will continue to ensure the financial integrity of Superfund site-specific cost accounting data and provide timely and accurate reports to Regional and Headquarters managers. Other administrative services will be enhanced in areas such as Superfund property management and program systems development.

Consulting Services

The Superfund program uses consulting services to provide additional technical expertise. Specifically, consultants are called upon to develop designs for cost analysis research, models for remedial projects cost estimation, and project management training courses for Enforcement and Remedial Project Managers as well as On-Scene Coordinators.

SUPERFUND

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE (+) DECREASE (-) 1991 VS 1990
Incremental Outputs				
ENFORCEMENT ACTIONS				
Response Enforcement				
106 Civil Actions	49	86	96	+10
Remedial Administrative Orders .	31	37	40	+ 3
Other Administrative Orders . .	187	215	137	-78
Criminal Referrals	0	2	4	+2
Criminal Investigations	2	4	6	+2
Cost Recovery				
107 Referrals	83	69	94	+25
Administrative	67*	29	22	- 7
RESPONSE ACTIONS				
Removal Actions				
Fund Financed	236	190	190	0
PRP Response	85	63	63	0
Pre-Remedial Activities				
Preliminary Assessments . . .	2,228	2,020	2,000	-20
Site Inspections	1,732	1,660	1,175	-485
Remedial Investigations Feasibility Studies				
Fund Financed	45	50	10	-40
PRP Response	70	38	20	-18
Remedial Designs				
Fund Financed	37	45	81	+36
PRP Response	67	59	74	+15
Remedial Actions				
Fund Financed	31	10	16	+6
PRP Response	43	36	60	+24

* The 1989 actual includes voluntary cost recoveries and cost recoveries resulting from demand letters.

SUPERFUND

PROGRAM ACTIVITIES	ACTUAL 1989	CURRENT ESTIMATE 1990	ESTIMATE 1991	INCREASE (+) DECREASE (-) 1991 VS 1990
Cumulative Outputs				
ENFORCEMENT ACTIONS				
Response Enforcement				
106 Civil Actions	191	277	373	+96
Remedial Administrative Orders	108	145	185	+40
Other Administrative Orders	663	879	1,016	+137
Criminal Referrals.	0	2	6	+4
Criminal Investigations . .	10	14	20	+6
Cost Recovery				
107 Referrals	319	388	482	+94
Administrative*	270	299	321	+22
Criminal Referrals				
RESPONSE ACTIONS				
Removal Actions				
Fund Financed	1,270	1,460	1,650	+190
PRP Response	396	459	522	+63
Pre-Remedial Activities				
Preliminary Assessments . .	29,714	31,136	33,136	+2,000
Site Inspections	10,863	12,464	13,639	+1,175
Remedial Investigations Feasibility Studies				
Fund Financed	530	580	590	+10
PRP Response	258	296	316	+20
Remedial Designs				
Fund Financed	200	245	326	+81
PRP Response	148	207	281	+74
Remedial Actions				
Fund Financed	135	148	164	+16
PRP Response	126	159	219	+60

* This activity includes administrative plus voluntary cost recoveries and cost recoveries resulting from demand letters.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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SUPERFUND
Hazardous Substances Research

(DOLLARS IN THOUSANDS)

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Scientific Assessment- Superfund						
Hazardous Substance Superfund		$4,154.5	$3,984.5	$4,481.2	$4,467.3	-$13.9
	TOTAL	$4,154.5	$3,984.5	$4,481.2	$4,467.3	-$13.9
Monitoring Systems & Quality Assurance - Superfund						
Hazardous Substance Superfund		$13,060.4	$12,558.2	$13,330.6	$13,568.0	$237.4
	TOTAL	$13,060.4	$12,558.2	$13,330.6	$13,568.0	$237.4
Health Effects - Superfund						
Hazardous Substance Superfund		$3,904.8	$3,606.8	$3,566.7	$3,804.5	$237.8
	TOTAL	$3,904.8	$3,606.8	$3,566.7	$3,804.5	$237.8
Environmental Engineering & Technology - Superfund						
Hazardous Substance Superfund		$31,639.5	$30,355.3	$39,590.7	$31,303.9	-$8,286.8
	TOTAL	$31,639.5	$30,355.3	$39,590.7	$31,303.9	-$8,286.8
Environmental Processes & Effects - Superfund						
Hazardous Substance Superfund		$4,893.8	$4,919.8	$6,422.0	$7,488.5	$1,066.5
	TOTAL	$4,893.8	$4,919.8	$6,422.0	$7,488.5	$1,066.5
Technical Infomation And Liaison Superfund						
Hazardous Substance Superfund		$798.7	$654.1	$1,686.1	$1,015.7	-$670.4
	TOTAL	$798.7	$654.1	$1,686.1	$1,015.7	-$670.4
Exploratory Research - Superfund						
Hazardous Substance Superfund		$14,701.9	$8,107.3	$8,679.5	$9,435.5	$756.0
	TOTAL	$14,701.9	$8,107.3	$8,679.5	$9,435.5	$756.0
TOTAL:						
Hazardous Substance Superfund		$73,153.6	$64,186.0	$77,756.8	$71,083.4	-$6,673.4
Hazardous Substances Research	TOTAL	$73,153.6	$64,186.0	$77,756.8	$71,083.4	-$6,673.4

SUPERFUND
Hazardous Substances Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
PERMANENT WORKYEARS					
Scientific Assessment-Superfund	13.6	14.1	16.6	16.6	0.0
Monitoring Systems & Quality Assurance - Superfund	25.5	26.3	27.2	27.2	0.0
Health Effects - Superfund	3.3	3.0	3.0	3.0	0.0
Environmental Engineering & Technology - Superfund	45.2	68.9	56.8	56.8	0.0
Environmental Processes & Effects - Superfund	8.2	11.5	20.5	20.5	0.0
Technical Infomation And Liaison Superfund	1.3	7.5	5.0	5.0	0.0
Exploratory Research - Superfund	1.0	1.0	1.0	1.0	0.0
TOTAL PERMANENT WORKYEARS	98.1	132.3	130.1	130.1	0.0
TOTAL WORKYEARS					
Scientific Assessment-Superfund	15.0	14.1	16.6	16.6	0.0
Monitoring Systems & Quality Assurance - Superfund	26.2	26.3	27.2	27.2	0.0
Health Effects - Superfund	3.3	3.0	3.0	3.0	0.0
Environmental Engineering & Technology - Superfund	47.5	68.9	56.8	56.8	0.0
Environmental Processes & Effects - Superfund	8.2	11.5	20.5	20.5	0.0

SUPERFUND
Hazardous Substances Research

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Technical Infomation And Liaison Superfund	2.1	7.5	5.0	5.0	0.0
Exploratory Research - Superfund	1.0	1.0	1.0	1.0	0.0
TOTAL WORKYEARS	103.3	132.3	130.1	130.1	0.0

SUPERFUND

Hazardous Substance Research

Principle Outputs by Objective

Objective 1: Provide Techniques and Procedures for Site and Situation Assessment

1991: o Health and Environmental Effects Documents (Scientific Assessment).

o Report on New Analytical Methods for Analyses Not Measurable by Standard Techniques (Monitoring).

1990: o Health and Environmental Effects Documents (Scientific Assessment).

o Technical Guidance Document on Emerging Technology for the Treatment of Metal-Bearing Wastes (Engineering).

1989: o Prototype Cost Engineering Models for Remedial Response Technologies (Engineering).

Objective 2: Develop Technologies to Manage Uncontrolled Waste Sites

1991: o Report on Radio Frequency Heating for Treatment of Soils Contaminated with Wood Preserving Chemicals (Engineering).

o Construction Claims Advisor for Differing Site Conditions (Engineering).

o Interim Report on Bioreactor Design for Treating CERCLA Leachates (Engineering).

o Report on Uses of Isolated Natural Organisms to Enhance Bioremediation of Mixed Hazardous Wastes (Environmental Processes).

1990: o Handbook on In-Situ Treatment of Hazardous Waste (Engineering).

o Report on Enhancing Biodegradation of a Gasoline Spill in Ground Water (Environmental Processes).

o Report on a Field Demonstration of Using Nitrate to Bioremediate Hazardous Wastes (Environmental Processes).

o Report on Development of Procedures for Biological Cleanup of Trichloroethylene-contaminated Hazardous Waste Areas (Environmental Processes).

1989: o Status Report on Best Demonstrated Available Technologies (BDAT) for Superfund Wastes (Engineering).

Objective 3: Provide Information on Personal Health, Protective Equipment, and Procedures

1991: o Report on the Development of Methodology for Determining the Reliability of Flexible Membrane Liners (Engineering).

1990: o Interim Report on Improvement of Worker Safety via Robotics, Automation, and Task Modification (Engineering).

1989: o Technical Report on the Evaluation of Personal Hazard Detectors for Highly Toxic Chemicals (Engineering).

Objective 4: Support Reportable Quantities Regulatory Efforts

1991: o Reportable Quantity Chapters for Health and Environmental Effects Documents; and Independent Reportable Quantities Documentation for Carcinogenicity and Chronic Health Effects (Scientific Assessment).

1990: o Reportable Quantity Chapters for Health and Environmental Effects Documents; and Independent Reportable Quantities Documentation for Carcinogenicity and Chronic Health Effects (Scientific Assessment).

1989: o Reportable Quantity Chapters for Health and Environmental Effects Documents; and Independent Reportable Quantities Documentation for Carcinogenicity and Chronic Health Effects (Scientific Assessment).

Objective 5: Provide Technical Support to Enforcement, Program, and Regional Offices

1991: o Report on the Use of Canister Based Samples for Air Pathway Monitoring Volitales as Superfund Sites (Monitoring).

o Report on Plants That Can Be Used as Sentinel Species for Phytotoxicity at Superfund Sites (Environmental Processes).

o Report on Use of DNA Adjuncts as a Measure of Exposure of Wildlife at Superfund Sites (Environmental Processes).

1990: o Report on Exposure and Ecological Risk Assessment Methodologies (Environmental Processes).

o User's Manual on Use of Geostatistical Models for Managing Soil and Water Contamination (Environmental Processes).

o Report on Application of Biomarkers for Characterizing Complex Mixtures at Marine Superfund Sites (Environmental Processes).

1989: o Engineering Research Symposia for Selected Regions (Engineering).

o Report on New Bedford Harbor Pilot Dredging Study (Environmental Processes).

- o Report on Performance Evaluation of Pump-and-Treat Remediations (Environmental Processes).
- o Report on Lake Ontario TCDD Modeling Study (Environmental Processes).

Objective 6: Provide Quality Assurance Support for Superfund Program Requirements

1991: o Annual Report on Quality Assurance Support to the Contract Laboratory Program (Monitoring).

1990: o Annual Report on Quality Assurance Support to the Contract Laboratory Program (Monitoring).

1989: o Annual Report on Quality Assurance Support to the Contract Laboratory Program (Monitoring).

Objective 7: Provide Technology Transfer

1991: o Annual Report on Technology Transfer Activities (Technical Information).

1990: o Annual Report on Technology Transfer Activities (Technical Information).

1989: o Annual Report on Technology Transfer Activities (Technical Information).

Objective 8: Conduct Alternative/Innovative Technology Research, Development and Demonstration

1991: o Reports on Evaluations Conducted Under the SITE Program (Engineering).

o SITE Annual Report to Congress (Engineering).

1990: o SITE Annual Report to Congress (Engineering).

o Annual Report on Development and Demonstration of Immunoassay Detection System for Rapid Screening at Superfund Sites (Monitoring).

1989: o SITE Annual Report to Congress (Engineering).

o Report on Ten SITE Program Demonstrations and Applications Analyses (Engineering).

Objective 9: Conduct Hazardous Substances Health Effects/Risk Assessment and Detection Research

1991: o Tiered test scheme for evaluating the neurotoxic potential of Superfund substances (Health).

1990: o Evaluation of Pentachlorophenol Immunoassay (Monitoring).

o Chemical mixtures health research strategy (Health).

1989: o Graphic activity profiles for the third group of hazardous substances (Health).

Objective 10: Manage University Hazardous Substance Research Centers

1991: o Annual Report on the Hazardous Substance Research Centers.

1990: o Annual Report on the Hazardous Substance Research Centers.

1989: o Annual Report on the Hazardous Substance Research Centers.

SUPERFUND

Hazardous Substance Research

Budget Request

The Agency requests a total of $71,083,400 supported by 130.1 total workyears for 1991, a decrease of $6,673,400 and no change in total workyears over 1990. The request will only be for the Hazardous Substance Superfund appropriation. The decrease in funding reflects the one time add in 1990 to implement the 90 day Management Review recommendations.

Program Objectives

The Superfund research and development program provides a core of scientific and technical information to support implementation of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The research program concentrates on assessing the health and environmental risks posed by Superfund sites and on evaluating equipment and techniques for discovering, assessing, preventing, removing, and disposing of hazardous substances released into the environment.

Objective 1: Provide Techniques and Procedures for Site and Situation Assessment. This research provides techniques and procedures to allow on-site coordinators and remedial project managers to quickly and effectively assess the degree of hazard posed at specific uncontrolled waste sites.

Objective 2: Develop Technologies to Manage Uncontrolled Waste Sites. This research program develops and evaluates technologies which are not ready for field application and require additional lab development. These technologies are being developed as tools for cleanup under the Superfund program. This development activity must be carried out by the Agency because of the low commercial interest, low potential for profit, or because of the high economic risks associated with the development of the technology.

Objective 4: Support Reportable Quantities Regulatory Efforts. This research supports Superfund regulatory efforts by ranking and assigning Reportable Quantities (RQ) to chemicals based upon either carcinogenicity or chronic health effects information. This information is used by the program office to adjust reportable quantities for these chemicals.

Objective 5: Provide Technical Support to Enforcement, Program and Regional Offices. This research provides review of remedial action design, implementation plans, and review of new data submitted by liable parties for specific site problems. Review and technical expertise is also provided to the Enforcement program and Regional offices.

Objective 6: Provide Quality Assurance Support for Superfund Program Requirements. This research program provides extensive support to the National Contract Laboratory Program. Activities include development and promulgation of analytical methods to measure and characterize samples from Superfund sites, and review and evaluation of quality assurance and quality control plans.

Objective 7: Provide Technology Transfer. This research program distributes information to the Program office, Regions, States and local authorities to assist them in Superfund site cleanups.

Objective 8: Conduct Alternative/Innovative Technology Research, Development and Demonstration. This research program fulfills the Agency's responsibility under SARA Section 311(b) to carry out a comprehensive program of research, development, and demonstration for the purpose of promoting the commercialization of innovative and alternative treatment, and monitoring technologies.

Objective 9: Conduct Health Effects/Risk Assessment and Detection Research. This research program fulfills the Agency's responsibility under SARA Section 311(c) to carry out a comprehensive program of research and development to enhance the Agency's scientific capabilities to detect, assess, and evaluate effects on, and risks to, human health from hazardous substances.

Objective 10: Manage University Hazardous Substance Research Centers. This program funds research and training related to the manufacture, use, transportation, disposal, and management of hazardous substances through a university based centers program as authorized under SARA Section 311(d).

Objective 11: Alternative/Innovative Treatment Technology Test Facility. This research will provide the funds to establish the Test and Evaluation facility at Edison, NJ, by providing required monitoring, emissions control, and other equipment for the facility.

Objective 13: Conduct Research at the Gulf Coast Hazardous Waste Research Center. The Gulf Coast Hazardous Waste Research Center is a university-based research center comprised of eight institutions of higher education and located at Lamar University. Under joint Agency and state funding, it will conduct hazardous waste research on issues indigenous to the Gulf Coast area.

Objective 14: Superfund Scientific Instrumentation. This research provides support for scientific instrumentation and equipment.

Objective 15: Small Business Innovative Research. This research program provides contracted funds to small businesses to develop innovative proposals which are relevant to the Agency's mission and which appear feasible.

SCIENTIFIC ASSESSMENT

1991 Program Request

The Agency requests a total of $4,467,300 supported by 16.6 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents a decrease of $13,900 in funding and no change in total workyears.

Provide Techniques and Procedures for Site and Situation Assessment. Site-, chemical-, and situation-specific exposure assessment and risks assessments will be prepared to assist the Superfund program office, the Enforcement office, and Regions in evaluating the degree of hazard at uncontrolled waste sites during the remedial investigation and feasibility study (RI/FS) process. Specific activities will include the preparation of health and environmental effects assessments and provisions of risk assessment advice on a rapid turnaround (48-hour) basis.

Support Reportable Quantities Regulatory Efforts. Chemical-specific health effects documentation (cancer and other chronic effects) will be provided to the Office of Emergency and Remedial Response (OERR) for use in adjusting the Reportable Quantity amounts for various hazardous substances. These two risk categories are among those which are considered by the program office in adjusting Reportable Quantity amounts of given hazardous substances to reflect the potential hazard associated with their release into the environment.

Provide Technical Support to Enforcement, Program and Regional Offices. Site- and chemical-specific health assessments will be prepared to assess the relative health risk associated with remedial activities at Superfund sites at which Enforcement has the lead for implementing remedial responses. The Regional Risk Assessment Review Group will conduct reviews of risk assessments submitted by EPA Regional offices. A Technical Support Center for health and risk assessment provides site-specific assistance to Regional, State, and local officials.

Conduct Hazardous Substances Health Effects/Risk Assessment and Detection Research. Scientific assessment research will develop toxicity assessments, risk characterization, and exposure assessment techniques. Screening techniques for early detection of adverse health effects, and improved measurement techniques for non-cancer health end-points will be developed. An extensive program of pharmacokinetics modeling, exposure assessment methodology development, and assessment methodology for chemical mixtures is planned.

1990 Program

In 1990, the Agency is allocating a total of $4,481,200 supported by 16.6 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

Site-, chemical-, and situation-specific exposure and risk assessments are being prepared to assist Superfund operations, Enforcement, and the Regional offices in evaluating alternative cleanup decisions at uncontrolled Superfund sites. Activities include development of health effects assessments, and provision of risk assessment advice on a rapid turnaround basis. Chemical-specific data are being provided on carcinogenicity and on chronic effects to support the Superfund activities necessary to adjust or establish the Reportable Quantities (RQ) for hazardous substances. The Regional Risk Assessment Review Group continues to operate. A Technical Support Center for health and risk assessment is being established.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,154,500 supported by 15.0 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

The research program office produced approximately 50 health and environmental effects documents, 50 rapid response health assessments, and 250 carcinogenic and chronic health effects documents for many hazardous substances to support Reportable Quantity adjustment. The research program assisted with health and risk assessments of sites for the Enforcement office. Thirteen toxicological profiles were completed in 1989.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1991 Program Request

The Agency requests a total of $13,568,000 supported by 27.2 total workyears for this program, which will only be for the Hazardous Substance Superfund appropriation. This represents an increase of $237,400 and no change in total workyear. The increase reflects additional support for field sampling quality assurance research, and also provides for increased personnel and support costs.

Provide Techniques and Procedures for Site and Situation Assessment. Monitoring procedures for all media will be evaluated, validated, and standardized. Analytical protocols, sampling techniques, and data interpretation approaches will be prepared. Techniques to be investigated include air monitoring techniques for ambient and source sampling, sample preparation methods, automated data transfer techniques, geophysical methods, and remote sensing techniques.

Provide Technical Support to Enforcement, Program and Regional Offices. Site-specific technical assistance, monitoring, and characterization support will be provided to the program and Regional offices in response to their needs for accurate and precise site-specific data. This will include providing aerial imagery, photographic interpretation, and maps for pre- and post remedial site assessment. Oversight reviews for the monitoring portions of settlement agreements will be provided. In addition, support will be provided in the areas of ground water sampling, network design, use of geophysical techniques, and analytical methods.

Conduct Hazardous Substances Health Effects/Risk Assessment and Detection Research. Support for field sampling quality assurance research will be increased. This research will document and improve the precision and accuracy of field aspects of data collection methods used for all media at Superfund sites. The research program office will continue to develop advanced field monitoring techniques for measurement of hazardous substances. Technologies which are now primarily used in the laboratory will be adapted and further developed for field use to provide techniques and methods that allow more focused, complete, expedient, and cost-effective field monitoring for common hazardous substances at Superfund sites. The application of these in-the-field monitoring techniques and methods will accelerate site cleanup and reduce costs. Research activities will focus on the development, evaluation, and standardization of field analytical and sampling methods; development of cost effective sampling designs and approaches; and development of techniques for managing and interpreting field data. Immunoassay systems for screening single compounds or classes of compounds, field portable systems such as fiber optics chemical sensors, and x-ray fluorescence will be targeted for activity. Since volatile organic compounds are the most common contaminants at Superfund sites, initial analytical and sampling efforts will focus on these compounds. New screening methods for exposure assessment (exposure biomarkers) will be developed.

Provide Quality Assurance Support for Superfund Program Requirements. Quality assurance support will be provided to the Contract Laboratory Program (CLP) to ensure that data of known and documented quality are used in the Superfund program. A quality assurance program provides the basis for determining the accuracy of data used to make operational decisions. Quality assurance reference materials, such as calibration standards, quality control samples and performance evaluation samples will be prepared and distributed according to uniform and consistent protocols, for analysis by contract laboratories. The analytical data generated by the laboratories are audited in order to assess intra- and inter-laboratory performance and methods performance. This data is maintained in the Quality Assurance/Quality Control Data Base. Pre-award and post-award on-site contract laboratory inspections are performed to complement the performance evaluations.

Conduct Alternative/Innovative Technology Research, Development and Demonstration. Resources in 1991 will be used to demonstrate and evaluate innovative monitoring technologies. This will be a cooperative program with the private sector to determine technology applicability to Superfund site assessment and pollutant characterization. Monitoring techniques lacking private sector support, which are not ready for demonstration, and will also be evaluated and further developed for validation and demonstration. Technologies to be investigated will be selected from candidates currently being researched and/or developed in the private sector.

1990 Program

In 1990, the Agency is allocating a total of $13,330,600 supported by 27.2 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

Innovative technologies and approaches that offer potentially significant cost and time savings to Superfund site investigations are being given priority. A range of technologies meeting the above criteria will be studied in the area of advanced field monitoring methods, including field portable x-ray technology for metals detection, fiber optic technology for in-situ ground water monitoring, immunoassay methods for organics detection, field portable gas chromatography for volatile organics monitoring, and canister-based air samplers for detection of volatile organics. Field sampling quality assurance research has been introduced in 1989. This research effort will focus on developing standardized sampling guidance and audit procedures. Site and situation assessment procedures, such as analytical protocols, sample preparation procedures, and data interpretation procedures are being developed, evaluated, or demonstrated. Site-specific technical assistance will continue to be provided in numerous areas, including remote sensing, geophysical support, sampling and monitoring, and Geographic Information Systems (GIS). Quality assurance support will also be provided in 1990. Pre- and post-award on-site contract laboratory inspections are being performed to complement the performance evaluation studies.

1989 Accomplishments

In 1989, the Agency obligated a total of $13,060,400 supported by 26.2 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

Site-specific technical assistance was provided by the research program office during 1989. Topographic maps and aerial images (photographs) were analyzed as part of the program's remote sensing support. Support continued to enhance user competency of Geographic Information Systems (GIS). The research program office also provided quality assurance support, including reference materials, performance evaluation samples, and laboratory audits to EPA Regional offices.

HEALTH EFFECTS

1991 Program Request

The Agency requests a total of $3,804,500 supported by 3.0 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $237,800 in funding and no change in total workyears. This increase reflects expanded support for research on bioavailability parameters, and increased personnel and support costs.

Conduct Hazardous Substances Health Effects/Risk Assessment and Detection Research. This research program provides improved evaluation measures and data to detect, assess, and evaluate human health risk from hazardous substances at Superfund sites. This research includes providing methods to evaluate the hazard potential of waste mixtures, screening techniques for early detection of adverse health effects, and identification and improvement of measures of health endpoints, particularly non-cancer endpoints such as reproductive effects and neurotoxicity. Results will be used to assist Remedial project managers in assessment of risks at sites, to update the Superfund Human Health Evaluation Manual, and to provide guidance on pharmacokinetics and bioavailability parameters in risk assessment.

1990 Program

In 1990, the Agency is allocating a total of $3,566,700 supported by 3.0 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

In 1990, the health effects research program is working to provide methods to detect, assess, and evaluate the risks to human health from hazardous substances associated with Superfund sites. Test methods (integrated bioassay protocol) developed for the evaluation of hazard potential of waste mixtures are being applied to test single and mixtures of chemicals in order to evaluate constraints to apply to the additivity assumptions now used in mixtures risk assessment. Research continues to focus on improving the Superfund risk assessment process and is coordinated with the scientific assessment program and activities of the Program office, as well as, with the research activities of both the National Institute of Environmental Health Sciences (NIEHS) and the Agency for Toxic Substances and Disease Registry (ATSDR). In addition, an in-situ assay is being developed for use in post-cleanup toxics assessment at Superfund sites. Biological markers are being developed to assess relationships between exposure, dose absorbed, and target tissue dose.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,904,800 supported by 3.3 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

Development was completed on an integrated bioassay protocol for multiple health endpoints. A symposium was held on the in-situ evaluation of effects of hazardous substances, dose measurement techniques, and development of methods for predicting neurotoxic effects from complex mixtures.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $31,303,900 supported by 56.8 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents a decrease of $8,286,800 and no change in total workyears. The decrease reflects the combined effects of several factors. Funding for the Gulf Coast Research Center was eliminated and support for evaluating Superfund cleanup technologies, treatability studies, and technical support to response and cleanup activities was reduced due to the decision to allocate Superfund resources to higher priority research.

Provide Techniques and Procedures for Site and Situation Assessment. Engineering expertise and assessment procedures will be provided to assist the Superfund program in RI/FS studies at specified Superfund sites. Information will be provided on the cost and effectiveness of remedial action technologies for specific sites based on data collected from surveys and technology evaluations. Emphasis will be placed on the development of support tools to assist with RI/FS activities. Information will be provided on the biochemistry and genetics of PCB degradation by bacteria, and on the evaluation of solidification techniques for hazardous waste treatment.

Evaluate Technologies to Manage Uncontrolled Waste Sites. Development and evaluation of Superfund cleanup technologies will be supported at a lower level. Evaluations will be conducted on technologies which are being developed as cleanup tools for Superfund sites but which are not yet at the stage of being available for field application. Research activities will continue to focus on technologies involving extraction, degradation and/or detoxification, immobilization studies for solidification and/or stabilization of contaminated material combustion research, biosystems and/or stabilization biosystems technology, in-situ techniques for large municipal waste NPL sites, cross-media impacts of technologies. and BDAT development of Superfund wastes. Increased emphasis will be placed on biosystems research due to its potential to significantly reduce the cost of site cleanups and because the private sector has shown limited interest because of the high economic risks.

Provide Technical Support to Enforcement, Program and Regional Offices. Technical support will be provided at a reduced level to Agency and State personnel on engineering issues that arise during emergency and remedial responses at Superfund sites for case support. Information from Superfund research will be provided to ensure that the latest available procedures and technologies are employed.

Conduct Alternative/Innovative Technology Research, Development and Demonstration. The innovate treatment technology demonstration program (SITE) will focus on separation, chemical stabilization, detoxification, and destruction technologies that provide potential for improvement in cleanup at Superfund sites. SITE is composed of a field demonstration and evaluation component, an emerging technology component that cost shares development of promising technological ideas from the concept stage to pilot scale demonstration, and a technology transfer component which consists of project evaluation reporting and the SITE clearinghouse. Ten additional field demonstrations will be conducted and eight new emerging technologies projects will be added.

Conduct Research at the Gulf Coast Hazardous Substance Research Center. This Center was jointly funded by EPA and the State of Texas through a cooperative agreement to research hazardous waste technological issues indigenous to the Gulf Coast area. It is a consortium of eight institutions of higher education, with Lamar University serving as grantor. No funding is included for the Center in 1991, due to the need to allocate limited Superfund research resources to higher priority programs.

1990 Program

In 1990, the Agency is allocating a total of $39,590,700 supported by 56.8 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

In 1990, the engineering research program is working to provide improved and innovative technologies for cleaning up Superfund sites more economically. There is expanded research into the use of biological degradation (biosystems) for such cleanups. The SITE information clearinghouse is being expanded by the addition of a computer system that integrates all components of the clearinghouse. Ten additional SITE field demonstration projects are planned and eight new emerging technology projects will be selected for evaluation. The 1991 solicitation will be made in 1990 and call for projects that deal with treatment of contaminated soils and sludge. Equipment for the Test and evaluation Facility will be procured.

1989 Accomplishments

In 1989, the Agency obligated a total of $31,639,500 supported by 47.5 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

During 1989, the research program provided engineering technical support to review site assessment and feasibility plans and advise on remedial action were demonstrated. Research continued on the demonstration of in-situ control technologies with focus on activities in the most promising combined systems at field-scale application. Research continued in the SITE program to demonstrate on-site control technologies that can extract, degrade, detoxify, or immobilize contaminants. Field demonstrations were completed in the area of thermal extraction technologies, solidification and/or stabilization, in-situ vacuum extraction, and solvent extraction. Emerging technologies projects were initiated.

ENVIRONMENTAL PROCESSES AND EFFECTS

1991 Program Request

The Agency requests a total of $7,488,500 supported by 20.5 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $1,066,500 and no change in workyears. The increase reflects additional resources for technical support for subsurface modeling for the Superfund research program, ecological risk assessment, and for increased personnel and support costs.

Develop Technologies to Manage Uncontrolled Waste Sites. Environmental processes research will be conducted on the cleanup potential of in-situ biodegradation techniques (biosystems) related to contaminated soils and ground water. Research activities in this area are integrated with biosystems research in the engineering program and is an integral part of the efforts needed to bring these new, less costly, cleanup technologies to the field for use in achieving permanent site remediation as required by SARA. Research activities will include characterizing the subsurface biological, chemical, and physical processes that promote in-situ bio-remediation; environmentally enhancing the metabolic capabilities of indigenous microorganisms for biodegradation; and genetically manipulating microorganisms to design microbial strains with novel and enhanced biodegradation characteristics. Research will also focus on the ecological effects that might be associated with these biodegradation technologies. Potential environmental and health effects associated with genetically engineered organisms will be evaluated.

Provide Technical Support to Enforcement, Program and Regional Offices. Additional technical support will be provided to Agency and State personnel on the use of subsurface models, sampling and analytical techniques, assessment of contaminated marine coastal areas, development of exposure/risk assessment methodologies, and the application of bioassessment protocols for determining the toxicity of contaminated sites and samples. Evaluation of subsurface processes leading to mobilization and remediation of contaminant in soil and ground water will be significantly increased. The bioassessment protocol will be applied at actual Superfund sites for validation of the technique under rigorous, complex waste situations. These activities are needed to support program office activities to prioritize sites on the basis of their risk.

Conduct Health Effects/Risk Assessment and Detection Research. A new program will develop, evaluate, and document methods for estimating ecological risks posed by hazardous waste spills and/or sites, and for determining the relative risk reduction afforded by various cleanup options.

1990 Program

In 1990, the Agency is allocating a total of $6,422,000 supported by 20.5 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

Research is being initiated on the cleanup potential of in-situ biodegradation techniques related to contaminated soils and ground water. This research is closely coordinated with the engineering evaluations of techniques to prevent the migration of hazardous substances into ground water, and will be instrumental in determining whether biodegradation methods are potentially cost-effective alternatives to soil excavation or withdrawal, and treatment of contaminated ground water. Technical support is being provided to Agency and State staffs for site- and case-specific issues.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,893,800 supported by 8.2 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

During 1989, technical support was provided in response to specific requests from EPA Regions, Enforcement, and States on ground water sampling, analyses, data interpretation, and site-specific modeling. Plume movement and biological stabilization of subsurface contaminants were evaluated, and uptake of contaminants by fish was studied.

TECHNICAL INFORMATION AND LIAISON

1991 Program Request

The Agency requests a total of $1,015,700 and 5.0 total workyear for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents a decrease of $670,400 and no change total workyears. The decrease in funding reflects the one time add in 1990 to implement the 90 day Management Review recommendations.

Provide Technology Transfer. This activity provides technology transfer and training assistance on issues relevant to the Superfund cleanup program for the Program office, EPA Regions, and States.

1990 Program

In 1990, the Agency is allocating a total of $1,686,100 supported by 5.0 total workyear for this program, all of which is for the Hazardous Substances Superfund appropriation.

This research program is coordinating technology transfer activities, and delivering technological information and training to the Program office, Regions, States and contractors responsible for cleanup activities. This activity enhances the effective, timely, and efficient planning of permanent solutions in Superfund response actions.

1989 Accomplishments

In 1989, the Agency obligated a total of $798,700 supported by 2.1 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

This research program developed mechanisms to coordinate ORD technology transfer activities, and delivered technological information to the program office, Regions, States and contractors responsible for cleanup activities.

EXPLORATORY RESEARCH

1991 Program Request

The Agency requests a total of $9,435,500 and 1.0 total workyear for this program, all of which will be for the Hazardous Substances Superfund appropriation. The increase of $756,000 will support additional resources for scientific instrumentation, targeted research grants, the Research Centers program, Small Business Innovative Research, and to provide for increased personnel and support costs. There is no change in total workyears.

Conduct Hazardous Substances Health Effects/Risk Assessment and Detection Research. Targeted grants in the area of in-situ treatment of hazardous waste and monitoring for Superfund site assessments will be awarded. In addition, targeted grants in two new areas of research relevant to the Superfund program will be initiated. Approximately ten new grants will be awarded in 1991.

Manage University Hazardous Substances Research Centers. Five competitive Hazardous Substances Research Centers will continue to fund research and training in areas related to the manufacture, use, transportation, disposal, and management of hazardous substances. This research program is considered by EPA to be an important part of the overall multidisciplinary research program to address health, environmental, and engineering issues associated with hazardous substances. This university based program will foster the application of academic expertise in basic research to Superfund issues.

Superfund Scientific Instrumentation. This research program provides scientific instrumentation support to ORD research. Resources for 1991 will purchase needed equipment such as gas and high pressure liquid chromatographs, emission spectrometers, and other bench testing equipment and instruments.

Small Business Innovative Research (SBIR). This research program provides contracted funds to small businesses to develop innovative proposals which are relevant to the Agency's mission and which appear feasible. This research program is mandated by the Small Business Innovative Research Act. The SBIR program will focus on projects in control technology or process instrumentation development.

1990 Program

In 1990, the Agency is allocating a total of $8,679,500 supported by 1.0 workyears for this program, all of which is for the Hazardous Substance Superfund appropriation.

In 1990, a targeted grants program is funding research on hazardous waste abatement and control with the focus on heavy metal removal technologies. Support for the University Hazardous Substances Research Centers was continued.

1989 Accomplishments

In 1989, the Agency obligated a total of $14,701,900 supported by 1.0 workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

Five competitive Hazardous Substance Research Centers were established to perform long-term and short-term research, as well as technology transfer activities related to the manufacture, use, transportation, disposal, and management of hazardous substances. Twelve new targeted research grants were awarded with the focus on biodegradation of hazardous substances at Superfund sites.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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SUPERFUND
Hazardous Substance Response

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Hazardous Spill & Site Response						
Hazardous Substance Superfund		1114,446.9	1149,593.4	1062,634.2	1258,772.7	196,138.5
	TOTAL	1114,446.9	1149,593.4	1062,634.2	1258,772.7	196,138.5
TOTAL:						
Hazardous Substance Superfund		1114,446.9	1149,593.4	1062,634.2	1258,772.7	196,138.5
Hazardous Substance Response	TOTAL	1114,446.9	1149,593.4	1062,634.2	1258,772.7	196,138.5
PERMANENT WORKYEARS						
Hazardous Spill & Site Response		1,077.2	831.7	1,239.7	1,293.5	53.8
TOTAL PERMANENT WORKYEARS		1,077.2	831.7	1,239.7	1,293.5	53.8
TOTAL WORKYEARS						
Hazardous Spill & Site Response		1,146.0	1,331.7	1,294.4	1,293.5	-.9
TOTAL WORKYEARS		1,146.0	1,331.7	1,294.4	1,293.5	-.9

SUPERFUND

Hazardous Substance Response - Environmental Protection Agency

Budget Request

The Agency requests a total of $1,258,772,700 for the Hazardous Substance Superfund appropriation. Of the resources, $77,625,800 will be for administrative expenses to support 1,293.5 total workyears. This resource level represents an increase of $196,138,500 and a decrease of 0.9 total workyears from 1990. The increase in funds will be used to carry out response activities at projects in the design and construction phases of the remedial process.

In 1990, the Agency is allocating a total of $1,062,634,200 from the Hazardous Substance Superfund appropriation. Of these resources, $70,857,700 is for administrative expenses to support 1,294.4 total workyears.

In 1989, the Agency obligated $1,114,446,900 for the Hazardous Substance Superfund. Of these resources, $63,002,400 was for administrative expenses to support 1,146.0 total workyears.

PRE-REMEDIAL PROGRAM

1991 Program Request

The Agency requests a total of $76,629,700 for the Pre-remedial Program from the Hazardous Substance Superfund appropriation. This represents a decrease of $6,504,300 from 1990 levels. The majority of these resources support preliminary assessments (PA) and site inspection (SI) activities conducted at potential Superfund sites. SIs were decreased by 400 and Listing Site Inspections (LSI) by 75 in order to fund activities already in the remedial pipeline.

In the first full year after the implementation of the revised Hazard Ranking System (HRS), EPA will focus on training and execution of the HRS. Priorities will be given to the following activities: 1) conducting training programs for the Pre-remedial staff, state and tribal personnel, and appropriate contractors; 2) continuing to handle PAs at all sites within one year of listing in the program's CERCLA Information System (CERCLIS); 3) performing screening site inspections at all sites recommended for further evaluation based on their relative potential environmental impact; and 4) conducting LSIs at the highest priority sites determined likely to score above the revised HRS cutoff.

1990 Program

In 1990, the Agency is allocating a total of $83,134,000 from the Hazardous Substance Superfund appropriation for the Pre-remedial Program. The Agency is making steady progress toward eliminating the SI backlog while stressing its commitment to complete response activities at pre-Superfund Amendments and Reauthorization Act (SARA) sites according to the "worst sites first" strategy. In addition, the program will continue to: 1) conduct PAs within a year of listing in CERCLIS; 2) implement a "no hiatus" policy in conducting SIs during the transition to the revised HRS; 3) review all completed SIs to determine which sites require a LSI or the development of HRS listing packages; 4) evaluate the Multi-Site Cooperative Agreements (MSCA); 5) encourage state and Indian Tribe participation in the development of Pre-remedial guidance; and 6) use the Field Investigation Team and states to conduct site assessment work.

1989 Accomplishments

In 1989, the Agency obligated a total of $76,217,000 for the Pre-remedial Program from the Hazardous Substance Superfund appropriation. The program has completed 2,228 PAs at potential Superfund sites and reviewed 66 PAs conducted by other agencies to ensure their compliance with CERCLA and SARA. At the end of September 1989, EPA had conducted 1,675 SIs, exceeding the target of 1,250. In addition, the program reviewed 57 SIs at Federal facilities and scored 25 sites using the HRS. EPA completed 101 site listings for the NPL and proposed an additional 65 sites for listing.

As of September 30, 1989, the following items have been accomplished since the start of the Superfund program. At the 31,904 Superfund sites which have been entered into CERCLIS, the program has completed PAs at 29,714 (96 percent). The program has conducted SIs at 10,863 facilities, representing 34 percent of those facilities which have had a PA. A recent analysis shows that 14,341 sites have evidenced no need for further action. At the end of 1989, 2,075 sites have been scored by the HRS. The number of sites which are currently on the NPL is 1,225, of which 337 are proposed for final listing. Federal facilities account for five percent of the NPL facilities to date.

REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

1991 Program Request

The Agency requests a total of $55,650,000 for this program from the Hazardous Substance Superfund appropriation. This represents a decrease of $42,850,000 from 1990 levels. The Agency plans to shift resources from RI/FS to support the remedial projects that will be ready for construction or are in the construction phase of the remedial process.

EPA will start a modest number of RI/FSs to improve EPA's bargaining position with potentially responsible parties (PRPs). Resources will also support several large scale projects and ongoing RI/FS activities. Workyear allocations in this program will support increased interaction with the community, enhanced supervision of direct site activities, and increased oversight of contractors. The program will also build upon the National Contingency Plan (NCP) and the initiatives of the Administrator's Superfund Management Review (SMR). Guidance will be developed to streamline the operation of the Superfund program. This will be accomplished by making procedures and requirements clearer and more routine, and providing "model" products that can be used with minimal additional work.

1990 Program

In 1990, the Agency is allocating a total of $98,500,000 for this program from the Hazardous Substance Superfund appropriation. In the third year of the strategy to fully-fund all RI/FSs, the Agency is planning to initiate new Fund-financed RI/FSs at 50 projects and to start subsequent RI/FSs at 25 projects. Federal employees will conduct 16 of these RI/FSs using primarily in-house technical expertise. This initiative, which is fully implemented for the first time in 1990, is a training exercise designed to improve the efficiency and promote cost effectiveness in the RI/FS program.

The Agency is utilizing the issued guidance and technical assistance regarding the use of applicable relevant and appropriate requirements (ARARs). ARARs is currently being applied to standards-setting, as well as on early actions, streamlined RI/FSs, health risk assessment (public health evaluation), environmental evaluation, and implementation of the new remedy selection process. EPA is enhancing the quality control of risk assessment activities during the RI/FS phase. In addition, the RI/FS Program underscores the importance of the evaluation and selection of alternative technologies and the use of on-site technologies. Treatability studies, funded from the Remedial Support Program, are an important part of the RI/FS and ensure that adequate data exist to effectively evaluate each technology prior to remedy selection.

1989 Accomplishments

In 1989, the Agency obligated a total of $96,900,000 for this program from the Hazardous Substance Superfund appropriation. At the end of 1989, first RI/FSs were initiated at 45 sites, and 32 subsequent RI/FSs were started. Through the end of the year, 55 first and 26 subsequent Fund-financed Records of Decision (ROD) were signed at NPL sites. The program also implemented the guidance for the NCP entailing a site specific balancing process in which nine criteria are analyzed to make a decision concerning the final remedy selection for a project.

REMEDIAL DESIGN (RD)/REMEDIAL ACTION (RA)

1991 Program Request

The Agency requests a total of $618,975,000 for the RD and RA stages of the Remedial Program for the Hazardous Substance Superfund appropriation. This total amount includes $31,875,000 for projects with PRP oversight and $587,100,000 for Fund-financed projects. This request represents an increase of $236,237,500 to support additional new and ongoing remedial design and construction activities from 1990 levels.

The program will initiate 200 designs at remedial projects. Of these, 102 will be conducted by PRPs. RAs will commence at 124 projects with PRPs financing 85 of these projects. EPA estimates that the PRPs will assume almost 70 percent of design and construction work in 1991. The Hazardous Substance Superfund will assume responsibility for all projects where PRP response is not achieved.

The Agency will continue to implement management initiatives related to the remedial program which include: 1) implementing improvements to expedite the remedial design and construction process; 2) expanding support to Regional contracting programs and establishing contracting cost controls; 3) ensuring adequate administrative support for Remedial Project Managers (RPMs); and 4) providing necessary training for RPMs. The Agency will continue to implement management initiatives begun during 1989 to improve the retention, preparation, and recruitment of RPMs.

1990 Program

In 1990, the Agency is allocating a total of $382,737,500 for this program from the Hazardous Substance Superfund appropriation.

The RA prioritization criteria, developed during 1989, will be fully implemented in 1990. Environmental prioritization is the primary consideration in determining what sites are supported for Fund-financed construction. The prioritization criteria are based on the following principles: 1) protection of human health ; 2) actual threats to sensitive ecosystems and endangered species; and 3) increased priority as the risk becomes closer in time. In order for Regions to propose sites, they must have conducted the following activities: 1) a thorough PRP search; 2) an evaluation of large scale projects to determine whether aspects of the project can be partially funded without increasing cost or risk to health or the environment; 3) a determination that the project will be ready for construction when funds become available; and 4) a confirmation that the state has signed the Superfund State Contract to pay its share of the construction costs.

The Trust Fund fully supports the oversight of PRP work, all ongoing construction activity, long-term maintenance of remediated sites, and projects receiving both Federal and private funds. Designs are scheduled to take place at 154 remedial projects; PRPs are financing the design at 83 of these projects. The program will also start remedial actions at 75 projects; PRPs are expected to conduct 55 of these actions. The Agency also performs long-term activities at these sites, after the RA is completed, to ensure that the hazardous condition(s) has been effectively remedied.

1989 Accomplishments

In 1989, the Agency obligated a total of $457,692,200 for this program from the Hazardous Substance Superfund appropriation. The program initiated remedial design activity at 154 projects and began final remedial designs at 77 projects. As of September 30, 1989, remedial design activity has been initiated at 374 NPL sites.

The program began on-site remedial action at 178 NPL sites, surpassing the statutory requirement to start 175 since SARA's enactment. Of these, the program initiated 74 first RA starts during 1989, exceeding the end-of-year target of 67. Forty-three of the starts were PRP-financed and 31 were Fund-financed. Final remedial action was initiated at 34 NPL sites, over the end-of-year target of 33. Twenty-three of these actions were PRP-financed. The program deleted six sites from the NPL.

As of September 30, 1989, the following items have been accomplished since the start of the Superfund program. The program has remedies in place at 259 NPL sites. Of these 259 sites, 139 (54 percent) are Fund-financed. Construction has been completed at 52 NPL sites. The program has deleted 28 sites from the NPL. Post-closure monitoring will be continued at the remaining sites to provide the remedy verification needed for future deletion from the NPL.

REMOVAL ACTIONS

1991 Program Request

The Agency requests $104,500,000 for the Removal Program from the Hazardous Substance Superfund appropriation. Resources will be used to remove hazardous substances at 110 classic and time-critical emergencies at NPL sites. In addition, 80 removals will be conducted at non-NPL sites. The program will remain at a stable level of activity from 1990 with no major changes in policy or direction.

The Agency will continue to use the expanded removal authorities for emergency actions. The Removal Program will remain in a steady state as it continues to stabilize NPL sites where significant threats exist while additional long-term response is being considered. Top priority will continue to be given to: classic emergencies involving incidents (e.g., threats of fire or explosion) where response is generally necessary within a matter of hours; time-critical removals at sites on the NPL, to make these sites safe from immediate threats while they await remedial action; and time-critical removals at non-NPL sites posing major health and environmental threats which cannot be addressed by other authorities.

1990 Program

The Agency is allocating $105,250,000 for removal actions from the Hazardous Substance Superfund appropriation. These efforts enable the Agency to take immediate action to protect public health and the environment without waiting for the completion of a long-term analysis of the site or the results of more detailed site assessments. In addition to responding to emergencies, removals are taken where an immediate response is not critical, but some early response is necessary to protect public health or the environment. The Agency is planning to provide emergency responses at 190 major hazardous substance releases.

1989 Accomplishments

In 1989, the Agency obligated a total of $106,401,400 for removal actions from the Hazardous Substance Superfund appropriation. These resources were used to initiate removal actions at 41 NPL sites and at 195 non-NPL sites. In addition, removal actions were completed at 41 NPL and 133 non-NPL sites. Completions included sites that were initiated in previous years.

RESPONSE SUPPORT

1991 Program Request

The Agency requests a total of $124,175,400 for the Response Support Program from the Hazardous Substance Superfund appropriation. This represents an increase of $10,890,400 from 1990 levels. The resources for this program increase due to the additional sources of increased technical information and requests for sampling data and analysis from the Contract Laboratory Program (CLP).

The majority of these resources support: sample analysis services; technical training for On-Scene Coordinators (OSCs), RPMs, and states; policy analysis; and budget development. The Response Support Program will continue to ensure that the training and transfer of technology from the Office of Research and Development, other Federal agencies, and the private sector is available to OSCs, RPMs, state employees, and Superfund contractors. Activities undertaken to ensure the transfer of information and technologies will include: 1) using aerial imagery and photography for site identification and assessment; 2) providing chemical-specific fate/transport data for a specific medium exposed by the receptors; 3) providing active site-specific support in the removal and remedial action process of technology selection; and 4) providing advice and guidance on the use and limitations of mathematical models including uncertainty analysis.

In addition, the Superfund Innovative Technology Evaluation (SITE) program will continue to accelerate the development, demonstration, and use of innovative treatment technologies. The emerging technologies component of the program will receive the greatest emphasis during 1991. This aspect will focus on bench scale evaluation, identification of promising projects, and efforts to prepare selected technologies for evaluation in the demonstration phase.

The Response Support Program will continue its responsibilities for sample analysis and data review for all phases of the pre-remedial, remedial, and removal programs. The quality assurance (QA) program provides support to the CLP, which is responsible for most contract chemical analyses under the Superfund program. According to uniform and consistent protocols, quality assurance reference materials such as calibration standards, quality control samples, and performance evaluation samples are designed, prepared, and distributed for analysis by contract laboratories. In addition, the program will continue to be active in assisting the states with establishing their own QA Programs.

1990 Program

In 1990, the Agency is allocating a total of $113,285,000 for the Response Support Program from the Hazardous Substance Superfund appropriation. During 1990, the program's management systems are implementing changes to better support the Agency's strategic planning process. Key themes to these changes are: 1) ensuring that the program's systems recognize complexity, quality, and environmental benefit in assessments of program performance; 2) increasing the flexibility for program managers to focus finite resources on activities with the greatest impact; 3) placing greater emphasis on measuring results, both environmental and administrative, rather than only measuring activities; 4) implementing the Total Quality Management process to identify and eliminate wasted employee efforts; and 5) developing information which will facilitate evaluation by our managers on a quarter-by-quarter basis.

The SITE program is an example of the program's efforts to assess the quality of environmental benefits. The program continues to be fully operational in 1990. In addition to promoting the use of innovative treatment technologies, the program conducts full-scale evaluations of technologies at Superfund sites under joint EPA and private developer funding.

The Integrated Priorities Matrix is a tool for program managers to use when determining which Superfund activities have the greatest impact. The Matrix, developed in 1989, establishes general program priority setting in the event of scarce resources. The program is implementing two major initiatives to better measure program success and publicize its progress to the public. The program's new accountability system, "Strategic Targeted Activities for Results", places an emphasis on tracking selected and results-oriented activities, wherever possible. In addition, the program uses environmental indicators to assess environmental progress. Through CERCLIS and the associated local area network, the program provides quarterly information to managers and staff.

Other Response Support activities include sample analysis, preparedness, budget formulation, strategic planning, policy and program evaluation, financial accounting and tracking, and administrative services. The sample analysis and management activities conducted by the CLP, the Environmental Services Divisions and the states continue to be a primary component of the Response Support Program. By the end of 1990, the program's 92 sample analysis laboratories will have analyzed up to 130,000 samples; of these, 42 percent will be inorganic and dioxin analyses. The Chemical Emergency Preparedness and Prevention Program, whose goal is to prevent and prepare for chemical accidents, continues to prepare state status reports, emergency response simulation exercises, and chemical safety audits.

1989 Accomplishments

In 1989, the Agency obligated a total of $101,423,000 from the Hazardous Substance Superfund appropriation. The program began to implement the recommendations of the SMR, published in May of 1989. The SMR places emphasis on ensuring that the pipeline is maintained and that sites are moving through the pipeline as quickly as possible. The strategy set forth in the SMR directs the program to address the worst sites first, removing the sources of immediate threat and then, on a priority basis, dealing with the sources of long-term risk.

EPA continued an assessment of progress made toward reducing health and environmental risks at Superfund sites through the use of environmental indicators. The Agency plans to use these indicators to communicate to the Congress, the media, and the public actual environmental progress made by the Superfund program during the remedial process. Thus, in addition to citing the number of sites moving through the pipeline as proof of the achievements of the program, EPA has established a process to document specific environmental progress made at sites in each stage of the pipeline.

The success of the Response Support program is evident in the expansion of field activities and quality assurance procedures for sample analysis and the revision of the NCP and HRS. Specifically, the laboratory support program conducted a total of 104,990 samples, of which 67,777 were routine analytical samples and 37,213 were special analytical samples. EPA has been very active in researching and developing new technologies to be used in response activities. EPA awarded 12 grants for research and development and issued two additional solicitations for proposals. In addition, EPA established several Hazardous Substance Research Centers and an Alternative Treatment Technology Information Center in response to the SMR recommendations. EPA also published a number of information manuals concerning technology related research and development.

REMEDIAL SUPPORT

1991 Program Request

The Agency requests a total of $120,500,000 for the Remedial Support Program for the Hazardous Substance Superfund appropriation. This represents a decrease of $17,545,000 from 1990. The decrease in resources is attributed to the full implementation of the Alternative Remedial Contracts Strategy (ARCS).

The majority of these resources support remedial contract management activities, technical assistance and treatability studies for remedial projects, and grants to states and local groups. The Agency will proceed with the implementation of several management initiatives related to the Remedial Support Program. Resources will be used to ensure that states provide assurance, through the Capacity Assurance Plan (CAP) process, and that sufficient hazardous waste capacity will exist to manage wastes generated in the state during the next 20 years. The program will also continue to encourage states to enter into Cooperative Agreements, state Memorandum of Agreements (SMOA) or other management assistance agreements where the state expects to play a significant role. EPA will also continue to encourage the maximum involvement of Indian Tribes in planning and implementing all response activities. In addition, EPA will increase its efforts to improve public confidence and initiate dialogue with national interest groups and local community groups. The Agency will also continue to provide grants to local interest groups through the Technical Assistance Grants (TAG) Program, administer Core Grants to the states, and monitor the projects queued for remedial construction.

1990 Program

In 1990, the Agency is allocating a total of $138,045,000 for this program from the Hazardous Substance Superfund appropriation. The program continues to assess and evaluate the Remedial Program for improvements and management initiatives. Some of these initiatives are to: improve the process for conducting RI/FS; evaluate design and construction performance; implement appropriate improvements expanding Regional contract support capacity; enhance contract cost controls; and ensure adequate training and administrative support for RPMs.

The program encourages a balanced approach to site work, and advocates that both PRPs and states assume responsibility for remedial activities. The program will be making full use of construction management expertise available from the U.S. Army Corps of Engineers (COE) and the Bureau of Reclamation (BUREC), Department of the Interior. The program will be assigning oversight responsibility to the COE or BUREC for approximately 25 percent of PRP and Fund-financed RD and RA projects started in 1990. States and Indian tribes are being consulted throughout the project planning process to ensure integrated and coordinated response to hazardous situations. The program expects to have a total of 16 SMOAs in place by the end of 1990. In addition, EPA is making greater efforts responding to community concerns, executing the provisions of SARA and the NCP related to community involvement, and encouraging local participation in the TAG program, as enhanced by the 1989 revisions to the interim final rule.

1989 Accomplishments

In 1989, the Agency obligated $133,285,200 from the Hazardous Substance Superfund appropriation for the Remedial Support program.

The Agency implemented the ARCS Program, which obtains project management and technical services to support remedial response activities at NPL sites. The ARCS Program is based upon the concept of performance incentives. Quality of work performed on projects is directly related to the amount of future work received, as well as the level of fee awarded to contractors. Approximately 45 contracts were awarded during 1989.

EPA strengthened its partnership with states and Indian tribes through cooperative agreements and other mechanisms. EPA entered into 41 Core Program Cooperative Agreements (CPCA) with states and one to a Navajo Indian tribe. CPCAs may be secured by states or Federally recognized Indian tribes to conduct CERCLA implementation activities that are not related to specific sites, but to develop and maintain a state's or Tribe's ability to participate in CERCLA response. In addition, 26 TAGs were awarded to citizens groups, a substantial increase to the four TAGs awarded in 1988. Citizens groups can use the grants to employ technical advisors to interpret the problems and remedies associated with the local NPL site. During 1989, two SMOAs were finalized. This brings the total number of SMOAs to ten.

To satisfy the hazardous waste treatment or disposal capacity assurance requirements of CERCLA Section 104(c), a majority of states submitted CAPs. The CAPs addressed the states': 1) current hazardous waste management system; 2) hazardous waste minimization and recycling plans; 3) projected future hazardous waste generation, imports, and exports; and 4) projected future hazardous waste management systems. EPA also published an interim final rule, "Cooperative Agreements and Superfund State Contracts for Superfund Response Actions" and included a new Subpart F in the proposed NCP revisions that combines concepts from various sections of the existing NCP concerning state involvement in Superfund operations.

REMOVAL SUPPORT

1991 Program Request

The Agency requests a total of $80,716,800 for the Removal Support Program for the Hazardous Substance Superfund appropriation. This represents an increase of $9,891,800 from 1990. The increase in resources will support the two additional Technical Assistance Team (TAT) Contracts.

The majority of these resources are used to manage removal contracts which provide on-site technical services. Additional resources will support the emergency response operations of TAT and the Emergency Response Cleanup Services Contracts (ERCS), and an anticipated increase in the number of release notifications. The Agency will continue to receive and screen hazardous substance release notifications to determine what, if any, response is required. These resources will provide policy direction and technical support for removal activities, including the review of $2 million waiver requests and the expanded Continuing Release Regulations for release investigations at removal sites.

The EPA will continue to implement management initiatives begun in 1989 to improve the retention, preparation and recruitment of OSCs in order to enhance the effectiveness of the Superfund program. This effort involves many components, combined under the title "OSC/RPM Support Program." In addition, the program will continue to include full implementation of all of its components: career tracks and grades; the OSC/RPM Basic Training Academy; mentoring; continuing education; Superfund University Training Institutes; the Structured Training Evaluation Program; site/incident characterization; awards; professional organizations; workforce planning; and rotations.

1990 Program

In 1990, the Agency is allocating $70,825,000 for the Removal Support Program from the Hazardous Substance Superfund appropriation. These resources support 12,000 release notifications, 635 release investigations, and on-scene monitoring of hazardous substances at 135 sites. EPA expects to add three more ERCS in 1990 for a total of 17 contracts.

In addition, the regulatory and guidance framework are being completed for the Removal Program, including use of revised removal authorities and promulgation of final regulations on the notification, reportable quantities (RQ), and the designation of additional hazardous substances. The program establishes RQ levels for extremely hazardous substances, publishes technical updates for some of the RQs that have been promulgated, and implements the rules currently being developed. In the vast majority of cases, the PRP or state or local government will take the lead in addressing the problem. In situations where more than one state is involved or where there is an unusually complex problem, the Federal government coordinates and funds the response. EPA and the U.S. Coast Guard continue to maintain an emergency response capability, including EPA's Emergency Response Team, comprised of Agency employees with special engineering and scientific expertise. This inter-agency relationship improves the Agency's ability to provide timely engineering and scientific advice to Federal, state, and local officials during hazardous substance response actions and results in reliable and cost-effective solutions to existing and potential environmental threats.

1989 Accomplishments

In 1989, the Agency obligated $79,525,700 to the Removal Support Program from the Hazardous Substance Superfund appropriation. These resources were used to conduct 775 release investigations, 8,662 release notifications, and on-scene monitoring of hazardous substances at 315 sites. The program began to implement the SMR recommendation to make NPL sites safe, accelerate responses at NPL sites, and conduct removal assessments at all NPL sites. In October 1989, the program issued draft guidance on determining the safety of NPL sites and the requirements that must be met before a response may be accelerated. In addition, the program formally stated its commitment to conducting a removal assessment at all unaddressed NPL sites. This program provided administrative support personnel and training to assist OSCs in managing removal actions. The program continued to pursue a diversified contracting strategy with a shift to the Regions of some of the contracting responsibilities. The program awarded eight new Regional ERCS contracts bringing the total number to 14.

SUPERFUND
Hazardous Substance Response - Support

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Hazardous Substance Response - OW						
Hazardous Substance Superfund		$1,757.9	$2,050.1	$2,055.3	$2,075.1	$19.8
	TOTAL	$1,757.9	$2,050.1	$2,055.3	$2,075.1	$19.8
Hazardous Substance Response - OAR						
Hazardous Substance Superfund		$2,026.5	$2,925.2	$2,922.6	$3,102.2	$179.6
	TOTAL	$2,026.5	$2,925.2	$2,922.6	$3,102.2	$179.6
TOTAL:						
Hazardous Substance Superfund		$3,784.4	$4,975.3	$4,977.9	$5,177.3	$199.4
Hazardous Substance Response - Support	TOTAL	$3,784.4	$4,975.3	$4,977.9	$5,177.3	$199.4
PERMANENT WORKYEARS						
Hazardous Substance Response - OW		15.7	24.0	23.3	24.0	.7
Hazardous Substance Response - OAR		16.9	20.5	19.4	20.5	1.1
TOTAL PERMANENT WORKYEARS		32.6	44.5	42.7	44.5	1.8
TOTAL WORKYEARS						
Hazardous Substance Response - OW		19.4	24.0	24.0	24.0	0.0
Hazardous Substance Response - OAR		18.4	20.5	20.5	20.5	0.0
TOTAL WORKYEARS		37.8	44.5	44.5	44.5	0.0

SUPERFUND

Hazardous Substance Response - Support

Budget Request

The Agency requests a total of $5,177,300 supported by 44.5 total workyears for 1991, an increase of $199,400. There is no increase in total workyears from 1990. All of the request will be for the Hazardous Substance Superfund appropriation.

HAZARDOUS SUBSTANCE RESPONSE - OFFICE OF WATER

1991 Program Request

In 1991, the Agency requests a total of $2,075,100 supported by 24.0 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $19,800 which reflects increased personnel and support costs.

In 1991, the Agency will sample up to seven additional Superfund sites and will analyze untreated wastewaters, pretreated wastewaters and pretreatment system sludges. Three sites will be selected for extended-term sampling. Data from the samples will supplement and expand existing data to characterize untreated Superfund site wastewaters, the performance of on-site pretreatment systems and the fate of pollutants in publicly owned treatment works (POTWs) receiving these wastewaters. Cooperative treatability studies with the Office of Research and Development (ORD) will continue to focus on additional pollutants and POTW design and operating characteristics not covered in previous studies. These data, together with an ORD treatability data base, will be used to update, refine and test the PC-based treatability model to be used by CERCLA site Regional Program Managers, POTW operators and pretreatment program personnel to predict the fate of pollutants in POTWs. An updated guidance manual will be published by the end of 1991 which also addresses Superfund site discharges directly to surface waters. The Agency will also continue to develop sediment criteria for metals and certain organic chemical pollutants, focusing on bioaccumulative pollutants believed to be the cause of significant risk to aquatic systems and to humans consuming contaminated fish flesh.

Regions will continue to analyze the need for new or revised local limits at those facilities identified as receiving CERCLA wastewaters. Approximately 30 such facilities will require efforts in this activity. Regions will continue to review remedial action alternatives to ensure that appropriate technology and water quality considerations have been addressed. Regions will continue to assess compliance where Superfund facilities have existing discharges to surface waters. Headquarters and Regions will continue to evaluate and revise as necessary NPDES permits and local limits in light of information received from the Toxic Release Inventory.

Regions will continue to provide case-by-case review of Superfund sites on the National Priority List (NPL). Documents will be reviewed to ensure that applicable, relevant and appropriate drinking water Maximum Contaminant Level

Goals (MCLGs) and/or Maximum Contaminant Levels (MCLs) are applied; for contaminants with no MCLG/MCL established, Regions will supply and interpret toxicological data. EPA will provide recommendations that consider both the technical and cost effectiveness of water supply treatment or the need to provide an alternate supply. Regions will be involved throughout the remedial process for sites with a contaminated water supply. This involvement includes reviewing Remedial Investigations (RIs) to examine data to characterize the releases; reviewing Feasibility Studies (FSs) which analyze clean-up alternatives; and documenting final clean-up decisions in the Record of Decision (ROD). For each site, this is a multi-year process.

The Regions, together with the states, will evaluate the effectiveness of drinking water remedial actions and will provide oversight of drinking water regulations to meet requirements under the Safe Drinking Water Act (SDWA).

1990 Program

In 1990, the Agency is allocating a total of $2,055,300 supported by 24.0 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation.

The Agency is continuing to analyze samples of untreated wastewaters, pretreated wastewaters and pretreatment systems from ten Superfund sites that discharge to POTWs; five additional sites are being sampled on an extended basis. Data from the samples supplement and expand existing data to characterize untreated Superfund site wastewaters, the performance of on-site pretreatment systems and the fate of pollutants in POTWs receiving these wastewaters. The program is continuing its treatability studies of on-site pretreatment systems. In conjunction with ORD, the program continues to update, refine and test the PC-based treatability model to be used by CERCLA site personnel, POTW operators and other pretreatment program personnel to predict the fate of pollutants in POTWs. This new data will be published in a final guidance manual in 1991.

Regions continue to review remedial action alternatives to ensure appropriate technology and water quality considerations have been addressed. Regions are continuing to assess compliance where Superfund facilities have existing discharges to surface waters.

The Regions continue to review response actions to ensure that applicable, relevant and appropriate drinking water standards are among the benchmarks applied. Where MCLG/MCLs have not been established for a particular contaminant, the Regions are providing assistance with toxicological data. Once a site with a contaminated water supply has been selected for inclusion on the NPL, the Regions participate in reviewing RI/FSs and in preparing RODs. These studies select and document the response actions for contaminated water supplies and address the need to provide water supply treatment or an alternate water supply.

The Regions, together with the states, are evaluating the effectiveness of drinking water remedial actions and are providing oversight of drinking water regulations to meet requirements under the SDWA.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,757,900 supported by 19.4 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

During 1989, the Agency continued efforts to characterize wastewater from Superfund sites. The Compatibility Analysis begun in 1987 was updated, as three additional sites were sampled and analyzed to expand the data base on the treatment and characteristics of wastewater. In addition, analytical methods and Quality Assurance/Quality Control procedures were developed as necessary.

Regions continued to review disposal alternatives and coordinate and develop discharge controls for an expanded list of Superfund sites. Additionally, they participated in meetings to develop workplans for each NPL site. The need for new or revised local limits was analyzed at approximately 50 facilities identified as receiving CERCLA wastewaters. Regions reviewed remedial action alternatives to ensure that they address water quality considerations. Compliance with imposed discharge conditions was assessed at locations where Superfund facilities discharge into surface water.

The Regions reviewed response actions to ensure that applicable, relevant and appropriate drinking water standards were applied. They also participated in the review of RI/FSs and in the preparation of RODs which document the final cleanup actions of contaminated water supplies, particularly the need to provide alternate water supplies. Analytical information was provided for the feasibility study process which compared the cost-effectiveness of remedial alternatives.

The Regions, together with the states, evaluated the effectiveness of drinking water remedial actions and provided oversight of drinking water regulations to meet requirements under SDWA.

HAZARDOUS SUBSTANCE RESPONSE - OFFICE OF AIR AND RADIATION

1991 Program Request

The Agency requests a total of $3,102,200 supported by 20.5 total workyears. This represents an increase of $179,600 and no change in total workyears from 1990.

In 1991 the Agency will provide sample collection, analysis, and data interpretation for remediation, removal, and enforcement activities at Superfund sites on the National Priority List, at Federal facilities, and at weapons production sites. The Agency will also develop guidance and criteria and will review reports, survey plans, and assessments from radiation and mixed waste contaminated sites. The program will provide technical assistance to Regional Offices including the development of an on-site waste volume reduction treatability plant at Glen Ridge/Montclair, New Jersey to clean up contaminated soils. This on-site project will include development and location of equipment, processing of soils, quality control, sample analysis, data interpretation, and reports of the preliminary evaluation. EPA will evaluate other remediation technologies, including incineration, for radioactive and mixed waste.

In 1991 the program will also support Regional air program technical assistance for clean-up activities, including the use of air quality models to determine risks posed by air emissions from clean-up activities and the establishment of temporary air monitoring networks around selected sites. The Agency will evaluate potential disposal techniques and technology, and review remedial action plans prior to implementation.

1990 Program

In 1990 the Agency is allocating $2,922,600 supported by 20.5 workyears to provide sample collection, analysis, and data interpretation for remediation, removal, and enforcement activities at Superfund sites. The EPA radiation program will complete the Hazard Ranking System for radionuclides, the laboratory evaluation and pilot of the Volume Reduction Chemical Extraction (VORCE) project, and a draft Human Health Evaluation Manual. The Agency radiation staff is continuing to review reports, survey plans, and environmental assessments at radiation contaminated sites.

The Regional air program staff is continuing to review field studies of sites and contractor work plans and provide technical assistance through air quality modeling, monitoring, and case studies. The support includes use of air quality models to determine the risks posed by air emissions from clean-up and disposal techniques and technology to minimize the chances of migration of unhealthy levels of toxics to the air.

1989 Accomplishments

In 1989 the Agency obligated $2,026,500 supported by 18.4 total workyears. The Agency continued technical support to the Regions to minimize radiation and air toxics exposure at Superfund sites. The radiation program support included: radiation risk assessments, engineering evaluations, and cost assessments. The Agency monitored on-site laboratory equipment and conducted all environmental sampling and monitoring in support of the emergency removal action at the Radium Chemical Company site in Queens, New York and continued treatability studies, such as VORCE, to examine physical and chemical methods for reducing the volume and activity of soils contaminated with radioactive elements. The Regional air program staff provided air quality modeling and monitoring for site clean-up activities. The program continued to assure that site decisions involving air pollution and radiation contamination issues were consistent with national air and radiation program policies and regulations.

SUPERFUND
Hazardous Substance Response - Interagency

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Interagency Superfund Department of Health & Human Services (ATSDR)						
Hazardous Substance Superfund		$44,499.0	$45,779.6	$45,178.7	$44,500.0	-$678.7
	TOTAL	$44,499.0	$45,779.6	$45,178.7	$44,500.0	-$678.7
Interagency Superfund United States Coast Guard						
Hazardous Substance Superfund		$4,948.2	$4,871.5	$4,807.6	$4,948.2	$140.6
	TOTAL	$4,948.2	$4,871.5	$4,807.6	$4,948.2	$140.6
Interagency Superfund Department of Justice						
Hazardous Substance Superfund		$25,100.0	$18,902.4	$25,754.2	$32,324.0	$6,569.8
	TOTAL	$25,100.0	$18,902.4	$25,754.2	$32,324.0	$6,569.8
Interagency Superfund Federal Emergency Management Agency						
Hazardous Substance Superfund		$1,705.0	$1,850.5	$1,826.3	$1,879.6	$53.3
	TOTAL	$1,705.0	$1,850.5	$1,826.3	$1,879.6	$53.3
Interagency Superfund National Oceanographic & Atmospheric Administration						
Hazardous Substance Superfund		$2,250.5	$2,244.9	$2,215.6	$2,280.1	$64.5
	TOTAL	$2,250.5	$2,244.9	$2,215.6	$2,280.1	$64.5
Interagency Superfund Department of Interior						
Hazardous Substance Superfund		$1,111.0	$1,234.2	$1,218.1	$1,253.5	$35.4
	TOTAL	$1,111.0	$1,234.2	$1,218.1	$1,253.5	$35.4
Interagency Superfund FEMA-Relocation						
Hazardous Substance Superfund		$804.6		$17.0		-$17.0
	TOTAL	$804.6		$17.0		-$17.0
Interagency Superfund Occupational Safety & Health Administration						
Hazardous Substance Superfund		$407.9	$992.6	$979.6	$1,008.2	$28.6
	TOTAL	$407.9	$992.6	$979.6	$1,008.2	$28.6

SUPERFUND
Hazardous Substance Response - Interagency

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Interagency Superfund Department of Health & Human Services (NIEHS)						
Hazardous Substance Superfund		$21,900.0	$36,736.9	$36,254.8	$21,915.0	-$14,339.8
	TOTAL	$21,900.0	$36,736.9	$36,254.8	$21,915.0	-$14,339.8
TOTAL:						
Hazardous Substance Superfund		$102,726.2	$112,612.6	$118,251.9	$110,108.6	-$8,143.3
Hazardous Substance Response - Interagency	TOTAL	$102,726.2	$112,612.6	$118,251.9	$110,108.6	-$8,143.3

SUPERFUND

Hazardous Substance Response - Interagency

Budget Request

The Agency requests a total of $110,108,600 for interagency activities under the Hazardous Substance Superfund appropriation in 1991, a decrease of $8,143,300 from 1990. The appropriation includes a $6,569,800 increase for the Department of Justice (DOJ) to carry out the increased number of cases stemming from the strengthened enforcement program. The request also contains small increases for the ongoing Superfund program activities of the United States Coast Guard (USCG), the National Oceanic and Atmospheric Administration (NOAA), the Department of the Interior (DOI), the Federal Emergency Management Agency (FEMA), and the Occupational Safety and Health Administration (OSHA). The decrease occurs in the Department of Health and Human Services National Institute of Environmental Health Sciences (NIEHS), and the Agency for Toxic Substances and Disease Registry (ATSDR) primarily due to a reduction in worker training grants. These agencies and offices request the necessary workyears within their own budget requests.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

1991 Program Request

The Agency requests a total of $66,415,000 ($44,500,000 for ATSDR and $21,915,000 for NIEHS) from the Hazardous Substance Superfund appropriation for this program. This request represents a decrease of $15,018,500 ($678,700 for ATSDR and $14,339,800 for NIEHS). The decrease returns ATSDR and NIEHS to their 1989 resource levels.

In 1991, ATSDR will continue to provide technical support and expertise as required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, to protect public health and worker safety, and to determine the toxicological and human health impacts associated with hazardous substances. Emphasis will be placed on expanding state responsibilities and involvement, and implementing both the Registry program and the research program. ATSDR will produce and oversee the state production of approximately 375 Health Assessments for National Priorities List (NPL) sites and in response to citizen petitions, perform pilot health effects studies for approximately 20 sites expected to require such studies, and provide approximately 2,600 health consultations to states, local governments and to EPA.

In addition, ATSDR will maintain and enhance toxicology data bases for those 200 chemicals named as most likely to be found at Superfund sites, produce and peer review final versions of the fourth set of profiles, consisting of 40 documents and 40 substances, and prepare and peer review draft versions of the fifth set of profiles consisting of 40 documents and 40 substances. ATSDR will also provide health assistance support for emergency responses through an estimated 1,000 consultations. ATSDR will refine the National Exposure Registry data collection instrument and update the existing 10 subregistries. ATSDR will also complete studies in six states which will allow characterization of prevalence and incidence of adverse reproductive outcomes from those states, and initiate four epidemiologic studies based on findings of pilot health studies. ATSDR will provide support and technical assistance to the health community by maintenance of automated directories and information systems such as TOXNET, and the Environmental Health Information Resources Directory.

In 1991, NIEHS will continue to: 1) provide basic research grants for the development of improved methods to detect hazardous substances in human tissues and environmental media; and 2) evaluate risks and health effects from hazardous substances, and for the treatment and attenuation of these effects. Research will be conducted at 11 universities by teams of biomedical, engineering, and physical scientists. In total, 85 studies will be completed. NIEHS will sponsor a national conference to summarize the findings of the basic research program for an audience of health and environmental agency staff, health care providers, industry officials, and concerned citizens. Graduate students and post-doctoral researchers assist in the basic research conducted at NIEHS supported universities.

NIEHS will continue to manage a grants program which provides training for workers and supervisors engaged in Superfund remediation efforts, activities that require the management and generation of hazardous wastes, environmental emergency response, and hazardous substance transport.

1990 Program

In 1990, the Agency is allocating a total of $81,433,500 ($45,178,700 for ATSDR and $36,254,800 for NIEHS) from the Hazardous Substance Superfund appropriation to this program.

In 1990, ATSDR will: 1)conduct health assessments at all sites proposed for the NPL; 2) conduct health studies at those sites when needed; 3) investigate complaints of illness or disease related to exposure to hazardous substances; 4) develop appropriate biological testing for exposed individuals; and 5) develop and maintain registries of exposed individuals, when needed. CERCLA requires ATSDR to perform a health assessment of a site on the NPL within one year from the date of its proposal on the NPL.

Additional and expanded activities mandated by the Superfund Amendments and Reauthorization Act (SARA) of 1986 for ATSDR are to: 1) develop a list of priority chemicals and produce toxicological profiles on those chemicals at the rate of 25 per year; 2) oversee an estimated 1,100 health assessments and health consultations for NPL sites, state non-NPL sites and in response to citizen petition; 3) develop a research program to help fill data gaps on toxicological profile chemicals, and ensure that all studies and research reports undergo peer review; 4) prepare and disseminate health education information; and 5) report to Congress on health-related activities. ATSDR continues to enhance and maintain toxicology data bases for chemicals generally found at Superfund sites or encountered in emergency situations. In addition, ATSDR provides health assistance support for emergency responses in the form of an estimated 1,000 health consultations. This is accomplished by expanding the state roles for routine concerns and/or on site consultations when necessary.

In 1990, NIEHS is substantially expanding both its basic research and training and worker safety training grants programs. In the area of research and training, grants are being made to two additional universities for a total of 11. Four scientific conferences will be held to ensure that the findings from the NIEHS research programs are available to EPA, industry, physicians and other health care providers, and to concerned citizens. The worker safety grants program is expanding. The program will solicit additional grants proposals from non-profit organizations with proven capacities to provide for non-professional workers whose duties involve the management or transportation of hazardous substances or who respond to environmental emergencies. These newly funded organizations will use the training materials developed by NIEHS's original 11 grantees. In addition, NIEHS will be conducting a thorough, on-site evaluation of the first 11 training grant programs initiated in 1987. These evaluations are designed to assure that: 1) the grantee organizations are providing a program of high quality instruction to workers targeted by the program; and 2) the training received is actually being used by workers such as laborers, emergency responders, hazardous materials transporters, and supervisors engaged in activities related to hazardous substance removal and containment.

1989 Accomplishments

In 1989, $66,399,000 was obligated from the Hazardous Substance Superfund appropriation by HHS ($44,499,000 for ATSDR and $21,900,000 for NIEHS).

In 1989, ATSDR completed 592 health assessments bringing the total completions to 1,154. ATSDR also completed two pilot studies/investigations on selected populations, initiated nine health studies and provided over 2,200 health consultations. In compliance with CERCLA, Section 104(i)(3), ATSDR is required to prepare toxicological profiles on the first 100 most hazardous substances found at Superfund sites. ATSDR completed 25 toxicological profiles during 1989. ATSDR conducted approximately 1,000 health consultations to private and public health care providers in the provision of medical care and testing of exposed individuals. ATSDR also completed a policy and procedures manual for the National Exposure Registry. The program initiated a Toxic Chemical Evaluation sub-registry comprised of eight sites with a population base of approximately 5,000 and established a dioxin sub-registry. ATSDR continued discussions with other agencies regarding toxicological profiles and health assessment research. ATSDR's health education activities during 1989 included the continuation of training for state and local health officials on the use of the TOXNET and other on-line systems operated by the National Library of Medicine. Additional activities included the development of environmental health case studies for use by the medical community, and education activities through the environmental and occupational health clinic network.

In 1989, nine universities received funding from NIEHS to conduct 78 separate basic research studies in a grants program designed to fulfill the requirements of a Superfund Basic Research and Professional Training Plan. The Plan was developed by NIEHS and approved by the HHS Advisory Council on Hazardous Substances Research and Training as required by Section 311(a) of SARA.

The worker safety training program became fully operational in 1989. Complete training programs were put in place by the 11 grantee organizations at centers across the United States. Technical advice and assistance was provided during the emergency response to the Alaska oil spill. In addition, a clearinghouse was established by NIEHS for their grantees to assure communication and coordination of a nationwide training effort in Superfund worker training.

UNITED STATES COAST GUARD (USCG)

1991 Program Request

The Agency requests a total of $4,948,200 for the Hazardous Substance Superfund appropriation for the USCG. This request represents an increase of $140,600 over 1990 levels. The increase returns the USCG to its 1989 resource level.

In 1991, the USCG will continue to reduce the occurrence and effects of releases of hazardous substances by enforcing applicable sections of CERCLA, as amended. The USCG will: 1) issue and check Certificates of Financial Responsibility; 2) investigate spill reports; and 3) determine potentially responsible parties for penalty and liability assessment. Furthermore, the authorizing legislation for the Comprehensive Oil Spill Liability and Compensation Act (COSLCA) is expected to correct a limitation in CERCLA regarding the authority to issue certificates of financial responsibility. Consequently, COSCLA is expected to add a significant enforcement workload to the issuance and maintenance of records for CERCLA certificates of financial responsibility. In addition, the USCG will continue to minimize the effects of releases of hazardous substances, pollutants or contaminants into the coastal environment. The USCG will accomplish this by providing an adequately equipped and properly trained workforce to investigate releases and to monitor or supervise removal actions. The USCG will also ensure the effective management of the CERCLA program within its purview which will enhance the effectiveness of USCG policies and plans that are established and maintained to aid On-Scene Coordinators (OSC) in successfully dealing with CERCLA incidents. The USCG will also develop chemical response equipment necessary for safely responding to chemical releases and will provide state-of-the-art personal protection for response personnel.

1990 Program

In 1990, the Agency is allocating a total of $4,807,600 from the Hazardous Substance Superfund appropriation for this program.

The USCG will continue to provide a central point of contact for receiving reports of releases of hazardous substances and will notify the pre-designated Federal OSC and other appropriate governmental and/or private entities. The USCG provides assistance in the assessment of the hazards of released pollutants. It supports the Regional Response Team (RRT) and National Response Team (NRT) components of the national response mechanism. The USCG continues the medical monitoring system to minimize the possibility of any physical impairment or harmful effects to USCG enforcement or response personnel resulting from exposure to hazardous substances, pollutants, or contaminants. The USCG develops and maintains information systems for program management analysis and the necessary chemical assessment data systems (i.e. the Computer-Aided Management of Emergency Operations (CAMEO)) for proper response to hazardous substance incidents. USCG establishes policies, plans, and training that aid OSCs in successfully dealing with Superfund incidents.

1989 Accomplishments

In 1989, $4,948,200 was obligated from the Hazardous Substance Superfund appropriation for USCG. An intensive effort was focussed on addressing the Alaska oil spill and other incidents. These resources were also used to conduct response training for USCG personnel, upgrade the capabilities of the National Response Center (NRC), maintain safety equipment, and provide field data systems to support response programs and minimize the possibility of harm to personnel from exposure to hazardous substances. In addition, the USCG reprogrammed resources to assist in the modernization of the NRC Information Systems.

DEPARTMENT OF JUSTICE (DOJ)

1991 Program Request

The Agency requests a total of $32,324,000 for the Hazardous Substance Superfund appropriation. This request represents an increase of $6,569,800 for increased cost recovery referrals and for expanded enforcement against Section 104(e) information request and consent decree violations.

In 1991, the requested resources will support the expanded Superfund caseload and the operation of a system which provides automated data support for complex cases. DOJ will maintain its support to EPA in reviewing negotiated consent decrees, de minimis settlements, enforcement of information requests, and an expanded docket of access cases. In addition, DOJ will impose civil penalties in instances where PRPs violate notification requirements of CERCLA, as amended, deny access to sites, destroy records, violate financial responsibility regulations, or violate administrative and judicial settlement agreements. DOJ will pursue criminal cases and continue to provide support to EPA's expanded cost recovery efforts. DOJ will also defend the Agency against citizen suits, pre-enforcement review cases, reimbursement claims, and challenges to EPA administrative civil penalty decisions.

1990 Program

In 1990, the Agency is allocating a total of $25,754,200 from the Hazardous Substance Superfund appropriation for this program. DOJ is providing civil and criminal enforcement litigation which includes counseling on and enforcing administrative orders, giving warrants for entry, instituting suits to compel removal and remedial actions, and recovering response costs incurred by the Fund.

1989 Accomplishments

In 1989, $25,100,000 was obligated from the Hazardous Substance Superfund appropriation by DOJ. These resources were used for litigation and other enforcement related activities. Key accomplishments included the filing of 42 settlement/injunctive (CERCLA Section 106) cases and 51 cost recovery (CERCLA Section 107) cases. In addition to the cases filed, DOJ supported 61 Section 106 and 174 Section 107 on-going cases filed prior to 1989. DOJ also concluded 28 Section 106 cases and 18 Section 107 cases by consent decrees.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

1991 Program Request

The Agency requests a total of $1,879,600 for the Hazardous Substance Superfund appropriation for FEMA. This request represents an increase of $36,300 over 1990. The increase returns FEMA to its 1989 resource level.

In 1991, FEMA will continue to support the Superfund program with the following activities. FEMA will conduct permanent and temporary relocation operations, provide general administrative support, and revise relocation manuals and regulations as required. FEMA will also support the management and coordination of training programs for local officials through the Emergency Management Institute and the National Fire Academy. These courses provide training to emergency response personnel and enable them to respond safely and expeditiously to hazardous materials incidents, preserve the environment, and protect public health and safety. Resources will be used to maintain local, state, and Federal emergency preparedness and administrative support. Resources will continue to fund the distribution of educational materials at state and local levels, and to support the training and team building necessary to enhance specialized response capabilities.

1990 Program

In 1990, the Agency is allocating a total of $1,843,300, of which $17,000 is supporting temporary and permanent relocations, from the Hazardous Substance Superfund appropriation.

In 1990, FEMA continues to provide technical assistance to state and local governments through improved coordination with the RRT for all preparedness activities, including contingency plan review, training support, planning support for four Regional workshops, and exercise evaluations. FEMA provides support to the NRT initiatives for information exchange.

1989 Accomplishments

In 1989, $2,509,600, of which $804,600 supported temporary and permanent relocations, was obligated from the Hazardous Substance Superfund by FEMA. These resources were used to: 1) support FEMA's development of relocations guidelines and regulations; 2) provide management oversight for temporary and permanent relocations; 3) provide preparedness guidance and technical assistance to state and local governments; 4) maintain the FEMA/Department of Transportation information exchange system; 5) enhance coordination of hazardous materials issues with the public and private sector; 6) provide continued support for NRT/RRT initiatives; and 7) support the FEMA/EPA instructor exchange program. FEMA also enhanced the knowledge, skill, and abilities standards for instructors and continued to deliver existing training systems at the state and local level.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

1991 Program Request

The Agency requests a total of $2,280,100 for the Hazardous Substance Superfund appropriation for NOAA. This request represents an increase of $64,500 over 1990 levels. The increase returns NOAA to its 1989 resource level.

In 1991, these resources will allow NOAA to continue its efforts to support technical assistance to Federal OSC for releases of hazardous substances in coastal and marine areas. NOAA will continue to maintain the enhanced CAMEO program which combines meteorological and chemical-specific analytical data for the purposes of emergency response activities. In addition, NOAA will continue to provide technical support to EPA during removal actions and will evaluate the impact on natural resources from releases of hazardous substances. NOAA will act as technical liaison with EPA and other Federal, state, and local agencies on coastal resource issues of common interest.

1990 Program

In 1990, the Agency is allocating $2,215,600 from the Hazardous Substance Superfund appropriation for NOAA. In addition to its continuing responsibilities, NOAA provides technical support for activities associated with hazardous waste site removal and remedial actions affecting coastal and marine resources. NOAA will also provide policy support to the NRT/RRT and to state and local entities in the areas of: 1) contingency planning; 2) community relations; 3) communications; 4) preparedness evaluation; and 5) training. Additionally, NOAA will provide technical support for activities associated with hazardous waste site removal and remedial actions affecting coastal and marine resources.

1989 Accomplishments

In 1989, $2,250,500 was obligated from the Hazardous Substance Superfund appropriation by NOAA. These resources were used to support NOAA's ongoing operations including the purchase, development, and field testing of state-of-the-art sampling and analytical equipment necessary for safe and efficient response operations. Funds were also used to support the computer-based communication and information systems to provide identification of likely accident location, trajectory analysis of spilled hazardous materials, potential human and environmental impacts of accidents, and training for response personnel via spill simulation.

DEPARTMENT OF THE INTERIOR (DOI)

1991 Program Request

The Agency requests a total of $1,253,500 for the Hazardous Substance Superfund appropriation for DOI. This request represents an increase of $35,400 over 1990 levels. The increase returns DOI to its 1989 resource level.

DOI will continue to participate in NRT preparedness and training activities, provide coordination of its range of natural resources and other scientific and technical expertise with Headquarters personnel in agencies participating in the NRT, provide staff support functions to the administration of the National Response System, and provide direction and technical information to field units with respect to releases of hazardous substances, whether they occur at Superfund sites or as emergency incidents.

1990 Program

In 1990, the Agency is allocating a total of $1,218,100 from the Hazardous Substance Superfund appropriation for this program. DOI participates in RRT (nine DOI Regions covering thirteen standing RRT) preparedness and training activities, as well as administrative work group activities. DOI also provides guidance, technical assistance and training to states and local governments to ensure that proper consideration is given to natural resources and sensitive environments during response actions involving Superfund sites, and that DOI logistical support and expert technical advice is promptly available. In addition, DOI conducts training sessions and workshops, develops guidance, and provides consultation and technical assistance to develop and enhance state and Federal trustee officials' capacity to conduct natural resource damage assessments. These efforts result in effective claims for compensation of natural resource losses or injuries from releases of hazardous substances from Superfund sites or during emergency incidents.

1989 Accomplishments

In 1989, $1,111,000 was obligated from the Hazardous Substance Superfund appropriation by DOI. These resources enabled DOI to participate in NRT/RRT preparedness and training activities, continue its involvement in state and local emergency preparedness, and provide technical assistance to natural resources trustees. DOI provided support to the USCG in its response to the Alaska oil spill and other oil spills.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

1991 Program Request

The Agency requests a total of $1,008,200 for the Hazardous Substance Superfund appropriation for OSHA. This request represents an increase of $28,600 over 1990 levels. The increase returns OSHA to its 1989 resource level.

In 1991, OSHA will conduct six compliance assistance visits to review site safety, health plans and programs. In response to requests for information regarding OSHA's Hazardous Waste Standard, OSHA will increase its correspondence and participation in conferences to explain the requirements of the Standard to requestors. OSHA will also provide technical assistance to EPA and other Federal agencies, and develop guidelines and procedures in the composition of manuals for assessing safety and health at hazardous waste sites.

OSHA will conduct approximately 50 audits and evaluations during 1991. OSHA also plans to support research concerning the effectiveness of personal protective equipment in shielding hazardous waste workers from the harmful effects of exposure to toxic substances. OSHA will conduct inspections at approximately 30 hazardous waste sites, based upon referrals from EPA, or other hazardous situations identified for EPA. In addition, the 20 states and 2 Territories which operate OSHA approved safety and health programs will conduct 22 inspections.

1990 Program

In 1990, the Agency is allocating a total of $979,600 from the Hazardous Substance Superfund appropriation. OSHA continues to conduct safety and health inspections at Superfund sites and provide assistance at the sites to the NRT/RRT. The resources allow OSHA to support technical assistance at hazardous waste sites, worker safety inspections and enforcement at sites where Superfund remedial actions are underway, and assistance to the NRT/RRT in preparedness and training activities. Funds are also applied to support information sharing activities, assist in review and development of contingency plans, participate in simulation exercises, and assist in training activities. OSHA uses resources to develop required training standards for the certification of employees engaged in hazardous waste operations.

1989 Accomplishments

In 1989, $407,900 was obligated from the Hazardous Substance Superfund appropriation by OSHA. The funds were used to train OSHA inspectors, maintain a special inspection program for Superfund sites, provide technical assistance to EPA, provide support for the activities of the NRT/RRT, and enforce a required worker protection standard.

ENVIRONMENTAL PROTECTION AGENCY

1991 Budget Estimate

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SUPERFUND
Hazardous Substance Response-Enforcement

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
				(DOLLARS IN THOUSANDS)		
PROGRAM						
Hazardous Substance Technical Enforcement						
Hazardous Substance Superfund		$128,118.8	$95,272.9	$127,030.0	$143,288.9	$16,258.9
	TOTAL	$128,118.8	$95,272.9	$127,030.0	$143,288.9	$16,258.9
Hazardous Substance Legal Enforcement						
Hazardous Substance Superfund		$13,776.4	$14,734.0	$23,511.3	$24,143.2	$631.9
	TOTAL	$13,776.4	$14,734.0	$23,511.3	$24,143.2	$631.9
Hazardous Substance - Criminal Investigations						
Hazardous Substance Superfund		$1,306.8	$1,568.5	$1,540.3	$1,572.4	$32.1
	TOTAL	$1,306.8	$1,568.5	$1,540.3	$1,572.4	$32.1
Hazardous Substance Technical Support - Office of Enforcement And Compliance Monitoring4						
Hazardous Substance Superfund		$7,842.7	$10,313.2	$11,670.3	$10,749.9	-$920.4
	TOTAL	$7,842.7	$10,313.2	$11,670.3	$10,749.9	-$920.4
TOTAL:						
Hazardous Substance Superfund		$151,044.7	$121,888.6	$163,751.9	$179,754.4	$16,002.5
Hazardous Substance Response-Enforcement	TOTAL	$151,044.7	$121,888.6	$163,751.9	$179,754.4	$16,002.5
PERMANENT WORKYEARS						
Hazardous Substance Technical Enforcement		623.4	931.4	923.0	961.4	38.4
Hazardous Substance Legal Enforcement		230.1	421.0	406.5	421.6	15.1
Hazardous Substance - Criminal Investigations		17.5	17.3	17.2	17.2	0.0
Hazardous Substance Technical Support - Office of Enforcement And Compliance Monitoring4		42.8	45.5	45.4	45.4	0.0
TOTAL PERMANENT WORKYEARS		913.8	1,415.2	1,392.1	1,445.6	53.5

SUPERFUND
Hazardous Substance Response-Enforcement

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
TOTAL WORKYEARS					
Hazardous Substance Technical Enforcement	669.7	931.4	961.4	961.4	0.0
Hazardous Substance Legal Enforcement	255.7	421.0	420.9	421.6	.7
Hazardous Substance - Criminal Investigations	17.6	17.3	17.2	17.2	0.0
Hazardous Substance Technical Support - Office of Enforcement And Compliance Monitoring4	44.6	45.5	45.4	45.4	0.0
TOTAL WORKYEARS	987.6	1,415.2	1,444.9	1,445.6	.7

SUPERFUND

Hazardous Substance Response - Enforcement

Budget Request

The Agency requests a total of $179,754,400 supported by 1,445.6 total workyears for 1991 for the Hazardous Substance Superfund appropriation for technical, administrative and legal enforcement activities. This is an increase of $16,002,500 and 0.7 total workyears from the level provided in 1990. The increase supports the "Enforcement-first" approach, recommended in the Administrator's Superfund Management Review, and enhanced efforts to achieve potentially responsible party (PRP) site remediation and recover Federal and state costs from responsible parties.

HAZARDOUS SUBSTANCE TECHNICAL ENFORCEMENT

1991 Program Request

The Agency requests a total of $143,288,900 and 961.4 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $16,258,900 and no total workyears to provide support for additional PRP remedial and removal response actions and additional cost recovery actions.

The Technical Enforcement effort in 1991 will continue to focus on using an array of available administrative and judicial enforcement tools to obtain PRP response actions, and on managing successful closure of PRP response and enforcement actions already underway. The Agency will stress the identification and pursuit of PRPs to support an increased percentage of work to be conducted by PRPs. PRPs not responding to requests for information will be subject to enforcement actions. The enforcement program will oversee PRP conduct of the study and remedy selection phase of the process. The program will select the remedy, announce the Record of Decision and negotiate Consent Decrees for the remedial design and remedial action phases. Compliance with these actions will be ensured by oversight. Enforcement actions for compliance will be taken, if necessary.

The Agency will encourage settlements with PRPs through the use of de minimis and mixed funding settlements. Where settlements are not achieved, EPA will issue Unilateral Administrative Orders (UAOs). In some cases, the Agency will pursue litigation for injunctive relief. EPA will also pursue non-settlers and follow with aggressive cost recovery actions when the Trust Fund is used for removal and remediation response actions. The Agency will pursue judicial and administrative cost recovery actions when a Fund-financed action has been undertaken, and EPA will seek treble damages when a PRP does not comply with a UAO. The program will place priority on large cases and cases constrained by statute of limitations. The Agency will initiate an increased number of judicial cost recovery actions in 1991. This strategy will result in the return of needed resources to the Trust Fund and, in the long term, increased compliance with Superfund enforcement actions.

Section 120 in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 requires interagency agreements for all Federal facility sites on the National Priority List (NPL). These agreements will cover the remedial investigation/feasibility study (RI/FS), remedy selection, remedy implementation and a five year review of the remedy. While the other Federal agency performs the RI/FS and initially selects the remedy, EPA must concur on the selected remedy. Thus early involvement with the other Federal agency is crucial for EPA to meet its statutory requirements.

1990 Program

In 1990, the Agency is allocating a total of $127,030,000 supported by 961.4 total workyears, all of which is from the Hazardous Substance Superfund appropriation, to secure and oversee responsible party response at NPL and other priority sites and to pursue cost recovery actions.

The Agency is significantly strengthening its enforcement program as a result of the Administrator's Superfund Management Review (SMR) conducted in 1989. Increased focus is being placed on finding PRPs early and exhausting all available enforcement tools to obtain their response before resorting to the use of the Trust Fund. Where PRPs fail to respond to information requests adequately, prompt enforcement follows. To encourage settlement, the Agency is pursuing de minimis and mixed funding settlements. Where negotiations fail to achieve settlement, the Agency is strengthening its efforts against non-settlers by issuing unilateral orders to achieve response or to establish treble damage claims for cost recovery.

The program is ensuring compliance by PRPs at sites where a settlement has been reached and work is underway. Strong oversight at this stage of the process will prevent unnecessary delays at the remedy selection phase. Where necessary, additional enforcement actions will be taken, assessing stipulated penalties or conducting alternative dispute resolution where the PRPs are out of compliance with the Administrative Order or Consent Decree.

Where Fund-financed action has been undertaken, the program is pursuing administrative or judicial cost recovery actions. Cost recovery actions will be pursued against non-settlers which will increase the cost of recalcitrance. Emphasis on the PRP searches will serve to strengthen enforcement action against recalcitrants.

Federal facility Interagency Agreements (IAGs) are expected to be in place for all facilities on the NPL. EPA must review and concur on the selection of remedy at Federal facilities, as well as facilitate public participation and state involvement in the process.

1989 Accomplishments

In 1989, the Agency obligated a total of $128,118,800 supported by 669.7 total workyears, all of which was from the Hazardous Substance Superfund appropriation.

PRPs conducted more than half the RI/FS and 60 percent of the Remedial Actions initiated in 1989. The program also concluded Remedial Design/Remedial Action (RD/RA) negotiations at NPL sites and referred cases to the Department of Justice for entering in the court. UAOs were issued, and in many cases, resulted in compliance. Settlements for RD/RA were the largest in any year. Agreements and orders in compliance at 71 sites resulted in remedial work valued at nearly $800 million. For the entire program, the value of enforcement PRP response was over $1 billion.

Standard interagency protocols have been negotiated with the Department of Defense and Department of Energy for response by these agencies at facilities owned or operated by them. Resolution of these protocols was critical for the completion of site specific IAGs which have been achieved at nearly half of the Federal facilities on the NPL.

HAZARDOUS SUBSTANCE LEGAL ENFORCEMENT

1991 Program Request

The Agency requests a total of $24,143,200 supported by 421.6 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $631,900 and 0.7 total workyears from 1990. The increase will fund additional personnel and support costs.

Federal Superfund legal enforcement work will continue in two major areas: (1) actions to secure privately-financed site cleanups, and (2) "cost recovery" actions to recoup Hazardous Substance Trust Fund resources expended in Fund-financed cleanups. The stepped-up enforcement effort or "enforcement first" concept, begun in 1989 and based upon the recommendations of the Agency's Superfund Management Review (SMR) will continue in 1991. This emphasis has forced companies and other polluters to carry out more hazardous waste site cleanups. In 1991, continued aggressive administrative and judicial enforcement actions will be pursued to secure privately-financed cleanups. These actions will allow the Agency to focus Fund resources on abandoned sites or sites with insolvent responsible parties where direct use of the Fund presents the only available response option. "Cost recovery" actions, which return monies to the Trust Fund and permit the Agency to address a larger number of sites, will emphasize actions where the statute of limitations creates a deadline for settlement. However, in all cases where Federal money must be used to remove an immediate public-health threat, the Agency will promptly pursue responsible parties to get reimbursement for Federal costs.

Headquarters activity will focus on the following areas: refinement of the strategy for use of de minimis, mixed funding, and non-binding preliminary allocation of responsibility (NBAR) settlement authorities; improved use of Alternative Dispute Resolution in Superfund settlements; implementation of a "unified" timeline for Superfund sites to establish timetables for negotiating settlements of Superfund claims; model/sample forms for certain kinds of Superfund settlements, complaints, or orders; and Section 106 penalty settlement policy and Section 107 treble damage settlement policy.

Program oversight will take on greater emphasis in 1991 as the Agency seeks to ensure that policy initiatives resulting from the SMR are achieved. New management systems being developed in 1990 to track new or refined indicators of Superfund enforcement accomplishments will be monitored and evaluated to ensure that key information necessary to formulate policy objectives is available. Headquarters will conduct Regional reviews to focus on attainment of revised policy objectives and the quality and quantity of Regional enforcement work.

Headquarters will focus most of its litigation management work on areas specified for greater use such as use of unilateral judicial enforcement, enforcement against non-settlers, enforcement against information request non-respondents, and treble damage and civil penalty claims. Headquarters capacity building activity will focus on training. The Superfund training program initiated in 1990 will continue to receive major emphasis because of the complexity of Superfund cases and the high turnover rate of attorneys in this area.

Negotiated settlements will remain the Agency's primary goal in most instances, and will necessitate early involvement of legal resources in the enforcement process. The requirement for active state participation will promote close cooperation and coordination between legal enforcement staff and state officials. Section 106 referrals with settlement will continue to receive major emphasis. Remedial negotiations with unilateral orders will provide both an incentive to come to an agreement and a basis for treble damages should negotiations fail and the order not be complied with. The emphasis of the SMR on negotiation with (and unilateral enforcement against) Potentially Responsible Parties (PRPs) for private party cleanup will continue to have a significant impact on the nature and timing of Regional legal enforcement involvement in response to the identification of hazardous waste sites. The statutory mandate for public participation and the use of several Superfund Amendments and Reauthorization Act (SARA) enforcement remedies will continue to influence Regional legal enforcement workload.

Regional legal enforcement in 1991 will be characterized by complicated and labor-intensive Section 106 negotiations for remedy cases, legal support for issuance and follow up of unilateral Section 106 administrative orders, as well as Section 107 cost recovery cases. Legal actions against PRPs will be aggressively pursued for maximum impact and to encourage recalcitrant PRPs to enter into negotiations.

In 1991, this program also incorporates Superfund resources in the Office Federal Activities which support Federal agencies and the Regions with a Superfund Federal facilities program. The Office of Federal Activities provides a information-exchange function in support of the Superfund program federal facilities activities. The focus of the Federal Facilities Program in 1991 includes the issuance of policy to ensure that Federal agencies meet their Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) responsibilities described in Section 120 of the statute. Further, the office will develop and conduct training workshops and conferences focusing on application of the Superfund process at Federal facilities.

1990 Program

In 1990, the Agency is allocating a total of $23,510,400 supported by 420.9 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation.

The recommendations of the Superfund Management Review established a vigorous agenda for enforcement activity which influenced not only 1989, but redirected Headquarters and Regional legal enforcement in 1990 and beyond. Implementation of the SMR has increased attention in Headquarters on a number of activities. To support Regionally identified cases, Headquarters will deploy troubleshooters with national expertise to provide targeted, hands on supplementary support for key cases. Headquarters staff will also aid completion and active management of information systems developed to track Agency implementation of priority matters. Headquarters legal resources will develop or participate in issuing guidance on administrative orders, models for remedial investigations/feasibility studies (RI/FSs) and remedial design/remedial actions (RD/RAs) activities, NCP implementation, state role, penalty policy, contractor management issues, and Fund/enforcement integration. Headquarters will initiate a system for monitoring private party litigation to track precedent-setting rulings that may impact the Agency's authorities and may warrant Agency participation through court action or as an amicus.

Considerable emphasis will be placed on implementing an Alternative Dispute Resolution component of the cost recovery program. Improvements to management systems begun in prior years to build capacity at Headquarters as well as in the Regions will also continue. These include: updating and training on a personal computer local area network which has increased productivity of headquarters attorneys and has facilitated information flow on complex cases; increased support for the Enforcement Document Retrieval System, which uses a sophisticated search capability to provide personal computer access to policies and precedents affecting cases ; improved coordination with Justice and the program office on tracking enforcement actions, development on penalty models for Superfund similar to those so successful used in air and water enforcement actions; and improvements to docket operations and maintenance.

In the Regions, legal work continues on a number of major Section 106 cases which are expected to reach successful resolution. (e.g. Horse Arenas, Hooker Chemical, Harvey and Knotts, Ottati and Goss, New Bedford Harbor, Cannons Engineering, and Western Processing) Intense legal involvement early in enforcement actions has improved the Agency's negotiating position and led to achievement of stronger settlements in 1989 -- a trend expected to continue in 1990. The upsurge in administrative enforcement as an effective tool in encouraging private party cleanup is expected to continue in 1990. In addition, judicial actions will be pursued where administrative enforcement tools do not succeed in securing response action, where remedial settlements need to be documented, and where costs associated with Fund-financed site cleanup need to be recovered.

Continued efforts are being made to improve and speed the litigation process for cost recovery cases already filed. For example, prosecutors of Section 107 cases will soon have the benefit of a Headquarters-developed computer program for calculation of interest payable by defendants in cost recovery proceedings. Regional legal resources are also heavily involved in significant Federal facility negotiations intended to result in Interagency Agreements for cleanup of federally owned sites. These actions are building on a number of precedent setting Federal facility actions taken in 1989 at Rocky Mountain Arsenal, Rocky Flats, and the Aberdeen Proving Ground.

In 1990, as a result of an Agency reorganization, resources for the Superfund Federal Facilities program of the Office of Federal Activities are provided here. In 1990, the Federal Facilities program will continue to use existing, as well as develop new communication vehicles to exchange information on Section 120 Interagency Agreements, Subpart K to the NCP on Federal Facilities, the Federal Agency Hazardous Waste Compliance Docket and Superfund activities and guidance pertinent to Federal facilities. Dissemination of Superfund materials will continue through the Federal Agency Environmental roundtable. The program will continue to work closely with the Regions to expand EPA's technical assistance/training role with regard to the Superfund process, concentrating on RI/FSs, PA/SIs, and emergency removals.

1989 Accomplishments

In 1989, the Agency obligated $14,123,600 supported by 255.6 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

The direction, scope, and accomplishments of the 1989 legal enforcement program were strongly influenced by the Agency's Superfund Management Review, which delineated an aggressive, "enforcement-first" policy for obtaining site cleanup by potentially responsible parties (PRPs). The 1989 implementation of the recommendations in this review lays the groundwork for charting the future course of Superfund enforcement, and strongly influences legal enforcement activities planned for 1990 and 1991.

Program accomplishments in 1989 reflected the emphasis placed on enforcement. The Agency dramatically increased the level of Superfund judicial enforcement activity in 1989 with 153 civil cases referred to the Department of Justice primarily seeking injunctive relief for hazardous waste cleanup by responsible parties, recovery from responsible parties of public money spent for site cleanup, or site access to perform investigation or cleanup work. Significantly more actions were successfully taken to obtain greater commitment by private parties to undertake hazardous waste site cleanup. For example, PRPs for the first time began more than half of the long-term "remedial actions" begun during the year. PRPs entered settlements for long-term cleanup at 48 sites for a total estimated value of $594 million (compared to a combined 1987 and 1988 total of 39 sites for $391 million). Similarly, the Agency used Remedial Unilateral Administrative Orders to order remedial work at 22 sites for $139 million, compared to a combined 1987 and 1988 total of 18 sites and $15 million. In an effort to address older cost recovery claims, the Agency referred cost recovery claims for 78 sites to the Department of Justice for prosecution, up from 56 referrals in 1988. Past costs sought by these recovery cases were valued at $136 million. In total, referrals to the Department of Justice were greater than the 1988 level by 34 percent. The strong performance is attributed to the Agency's response to internal management changes directed by the Agency's Administrator, and the shift to an enforcement-first approach to Superfund cleanups.

In addition to providing significant support to negotiations and trial preparation for major, complex Superfund cases, Headquarters staff completed most of the remaining guidance necessary for implementing new authorities provided in the SARA Amendments of 1986, including: procedures for employing new administrative penalty authorities; new arbitration procedures; guidance for bringing actions for injunctive relief under CERCLA/SARA; a model litigation report for Superfund enforcement cases; and guidance on landowner liability under CERCLA/SARA.

Both Headquarters and Regional legal resources were devoted to substantial up-front negotiations and preparation of referrals necessary to complete the significant accomplishments cited above. Work also continued on a number of landmark CERCLA cases. Enforcement attorneys extensively used cost-effective administrative orders to compel PRP actions at sites. (Administrative authority which allows penalty assessment provides a more timely and less staff-intensive enforcement tool.) A total of 182 settlements for responsible party cleanup, valued at $962 million, was reached in 1989.

In 1989, the Office of Federal Activities supported the Regions with a technical assistance program featuring training on key aspects of Superfund such as environmental review procedures; Subpart K of the NCP on Federal facilities; and the negotiations process for Federal facility agreements. This office played a critical role in ensuring that Federal agency staff obtain up-to-date guidance and policy information to ensure that they met their responsibilities outline in the statute and Executive Order 12580.

HAZARDOUS SUBSTANCE CRIMINAL INVESTIGATIONS PROGRAM

1991 Program Request

The Agency requests a total of $1,572,400 supported by 17.2 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $32,100 and no change in workyears from 1990. The dollar increase will provide for increased personnel and support costs.

Criminal referrals and indictments continue to grow due to changes in statutory authority and to the substantial increase in sites on the National Priority List. Criminal sanctions under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA) have changed from misdemeanors to felonies (punishable by a maximum of 3 years imprisonment, 5 years for second and subsequent convictions) for failure to report releases of hazardous substances, for destruction of records, and for submitting false information in a clean up.

Greater support from U.S. Attorneys (because of the felony sanctions) has also enhanced the number of investigations opened. CERCLA cases have increased over 50 percent because of the enhancement of criminal provisions in the Act. It is expected that the number of these investigations will continue to grow. In 1989, of the over 189 active investigations, approximately 85 are Resource Conservation and Recovery Act (RCRA)/CERCLA violations, representing approximately 48 percent of an agent's caseload and manpower commitments.

1990 Program

In 1990, the Agency is allocating a total of $1,540,300 supported by 17.2 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation.

This program has as its basic goal the initiation and conduct of criminal investigations under CERCLA. The Criminal Investigations Program takes the lead in prosecuting criminal cases of national significance with precedent-setting potential. The program also implements training programs for Agency personnel in CERCLA criminal case investigations.

RCRA counts are often combined with CERCLA counts in criminal cases. Often the Agency initiates investigations at apparently abandoned sites which may require Superfund for clean up, but the eventual result is that the referral contains RCRA counts which take precedence. Because of these situations, the Agency's record-keeping systems sometimes disguise the amount of time spent on CERCLA-related cases. These types of cases require the preponderance of our field agents' time, accounting for approximately 50 percent of current agent caseload.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,306,800 supported by 17.6 total workyears for this program, all of which is was from the Hazardous Substance Superfund appropriation.

In 1989, a record number of CERCLA investigations were opened. The Donohoo case in the Atlanta Area Office was the first felony conviction recorded under the National Emissions Standards for Hazardous Air Pollutants (NESHAPS)/CERCLA in the United States. This trend is expected to continue and many CERCLA investigations are, in fact, combined with RCRA investigations by our field agents and prosecuting attorneys. Past case investigations show that Office of Criminal Investigations field agents are spending considerable time on RCRA cases and related CERCLA/SARA offenses. In 1987 there were 68 new cases, in 1988 there were 97 new cases, and in 1989 there were 120 new cases.

HAZARDOUS SUBSTANCE - TECHNICAL SUPPORT

1991 Program Request

The Agency requests a total of $10,749,900 supported by 45.4 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents a decrease of $920,400 and no change in total workyears from 1990. The decrease in dollars is due primarily to a reduced level of required contract support.

The National Enforcement Investigations Center (NEIC) will provide necessary technical support to the increasing number of Superfund civil and criminal cases. NEIC will conduct multi-media investigations at Federal facilities or Government-Owned Contractor Operated (GOCO) facilities, which will include an evaluation of past on-site hazardous waste disposal practices. This information will be used to determine site-cleanup priorities and develop model evaluation procedures and remedial programs applicable at other Federal or GOCO facilities.

The NEIC function of developing procedures and protocols for preparing novel enforcement cases and supporting evidence will be expanded to provide Regional offices with advice and assistance on Section 106 Orders and subsequent potential judicial actions, technical assistance, and information integration support in cost recovery actions. These activities will support the recommendations in EPA's Superfund Management Review.

1990 Program

In 1990, the Agency is allocating a total of $11,667,300 supported by 45.4 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation.

In 1990, NEIC's activities include providing technical consultation and assistance in site evaluations and case preparations through:

a) extensive background information review and data and analysis;

b) field investigations, information retrieval and evaluations;

c) laboratory analysis;

d) report preparation;

e) supplemental technical information development;

f) fully defensible evidence and work products meeting all chain-of-custody and document control requirements;

g) expert technical testimony; and

h) support during Superfund cost recovery activities against responsible parties.

NEIC will continue to support evidence audit and computerized files development for numerous sites and provides training, placement and oversight of contractor evidence audit personnel in each Region. Extensive technical assistance to EPA and states on laboratory analytical procedures; preparation and handling of high hazard samples; disposal of hazardous laboratory waste; sample shipping procedures; training of EPA and state inspectors on site investigations and safety procedures; and in-depth studies of chemical hazards to laboratory and field personnel engaged in hazardous waste investigations will also continue.

1989 Accomplishments

In 1989 the Agency obligated a total of $7,842,700 supported by 44.6 total workyears, all of which was from the Hazardous Substance Superfund appropriation.

In 1989, as in previous years, NEIC provided financial assessments from the Superfund Financial Assessment System (SFFAS) to enable enforcement attorneys to estimate a responsible party's ability to pay clean-up costs at Superfund sites. This system was used in dealing with responsible parties, including non-settlers in the Resolve case in Region 1 and the Operating Industries case in Region 9. In addition, potentially responsible party (PRP) information from databases developed by the NEIC was provided as part of a networking effort to allow Regional attorneys to share litigation strategies when PRP's are identified across Regions. Especially noteworthy accomplishments are:

a) characterization of hazardous waste ("fingerprinting");

b) inclusion of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements in investigating compliance at major Federal facilities;

c) widespread Regional use of the contractor evidence audit litigation support program; and

d) computerized information systems searches of PRP's.

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SUPERFUND
Management and Support

PROGRAM		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
Hazardous Substance Financial Management - Headquarters						
Hazardous Substance Superfund		$8,228.8	$8,957.4	$8,991.1	$9,756.9	$765.8
	TOTAL	$8,228.8	$8,957.4	$8,991.1	$9,756.9	$765.8
Hazardous Substance Financial Management Regions						
Hazardous Substance Superfund		$3,654.7	$5,749.9	$5,715.4	$6,693.7	$978.3
	TOTAL	$3,654.7	$5,749.9	$5,715.4	$6,693.7	$978.3
Hazardous Substance Administrative Management - Headquarters						
Hazardous Substance Superfund		$10,093.5	$3,859.6	$3,851.7	$3,903.0	$51.3
	TOTAL	$10,093.5	$3,859.6	$3,851.7	$3,903.0	$51.3
Hazardous Substance Administrative Management - Regions						
Hazardous Substance Superfund		$4,767.9	$2,491.0	$3,455.0	$3,812.9	$357.9
	TOTAL	$4,767.9	$2,491.0	$3,455.0	$3,812.9	$357.9
Hazardous Substance - Contracts and Grants - Headquarters						
Hazardous Substance Superfund			$9,692.3	$10,258.6	$11,027.1	$768.5
	TOTAL		$9,692.3	$10,258.6	$11,027.1	$768.5
Hazardous Substance - Contracts and Grants - Regions						
Hazardous Substance Superfund			$1,821.1	$2,639.3	$2,908.8	$269.5
	TOTAL		$1,821.1	$2,639.3	$2,908.8	$269.5
Hazardous Substance Support Services - Headquarters						
Office of Inspector General					$788.0	$788.0
Hazardous Substance Superfund		$30,741.4	$32,484.0	$35,655.9	$39,212.9	$3,557.0
	TOTAL	$30,741.4	$32,484.0	$35,655.9	$40,000.9	$4,345.0

SUPERFUND
Management and Support

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
Hazardous Substance Support Services - Regions						
Hazardous Substance Superfund		$18,722.4	$14,732.8	$14,360.9	$17,337.9	$2,977.0
	TOTAL	$18,722.4	$14,732.8	$14,360.9	$17,337.9	$2,977.0
Hazardous Substance Computer Services						
Hazardous Substance Superfund		$9,247.8	$10,120.6	$9,987.9	$11,699.8	$1,711.9
	TOTAL	$9,247.8	$10,120.6	$9,987.9	$11,699.8	$1,711.9
Hazardous Substance Legal Services - Headquarters						
Hazardous Substance Superfund		$792.7	$804.2	$794.3	$910.3	$116.0
	TOTAL	$792.7	$804.2	$794.3	$910.3	$116.0
Hazardous Substance Legal Services - Regions						
Hazardous Substance Superfund		$1,077.6	$1,145.3	$1,110.2	$1,173.0	$62.8
	TOTAL	$1,077.6	$1,145.3	$1,110.2	$1,173.0	$62.8
Hazardous Substance Office of the Inspector General						
Office of Inspector General		$6,612.3	$10,156.9	$10,057.9	$12,318.4	$2,260.5
	TOTAL	$6,612.3	$10,156.9	$10,057.9	$12,318.4	$2,260.5
Hazardous Substance Office of Policy, Planning And Evaluation						
Hazardous Substance Superfund		$3,332.8	$3,237.0	$3,211.0	$3,449.6	$238.6
	TOTAL	$3,332.8	$3,237.0	$3,211.0	$3,449.6	$238.6
Hazardous Substance Office of the Comptroller						
Hazardous Substance Superfund		$607.0	$1,003.7	$990.9	$1,481.0	$490.1
	TOTAL	$607.0	$1,003.7	$990.9	$1,481.0	$490.1
Hazardous Substance - Executive Offices						
Hazardous Substance Superfund		$409.4	$790.1	$1,300.6	$1,022.6	-$278.0
	TOTAL	$409.4	$790.1	$1,300.6	$1,022.6	-$278.0

SUPERFUND
Management and Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Hazardous Substance ORD Management & Support Development - Lab Support					
Hazardous Substance Superfund	$220.2	$443.2	$532.6	$714.1	$181.5
TOTAL	$220.2	$443.2	$532.6	$714.1	$181.5
TOTAL:					
Office of Inspector General	$6,612.3	$10,156.9	$10,057.9	$13,106.4	$3,048.5
Hazardous Substance Superfund	$91,896.2	$97,332.2	$102,855.4	$115,103.6	$12,248.2
Management and Support TOTAL	$98,508.5	$107,489.1	$112,913.3	$128,210.0	$15,296.7
PERMANENT WORKYEARS					
Hazardous Substance Financial Management - Headquarters	53.4	56.9	56.9	56.9	0.0
Hazardous Substance Financial Management Regions	81.4	100.9	97.6	100.9	3.3
Hazardous Substance Administrative Management - Headquarters	148.4	61.2	52.6	52.6	0.0
Hazardous Substance Administrative Management - Regions	103.7	68.8	65.3	68.8	3.5
Hazardous Substance - Contracts and Grants - Headquarters		131.6	139.2	139.2	0.0
Hazardous Substance - Contracts and Grants - Regions		57.0	53.8	57.0	3.2
Hazardous Substance Legal Services - Headquorters	10.0	12.0	12.0	12.0	0.0
Hazardous Substance Legal Services - Regions	24.6	25.9	24.6	25.9	1.3
Hazardous Substance Office of the Inspector General	53.2	67.8	67.8	84.8	17.0

SUPERFUND
Management and Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
Hazardous Substance Office of Policy, Planning And Evaluation	11.1	12.8	12.1	13.1	1.0
Hazardous Substance Office of the Comptroller	9.3	13.9	13.9	13.9	0.0
Hazardous Substance - Executive Offices	1.0	2.5	11.3	11.4	.1
Hazardous Substance ORD Management & Support Development - Lab Support			1.8	1.8	0.0
TOTAL PERMANENT WORKYEARS	496.1	611.3	608.9	638.3	29.4
TOTAL WORKYEARS					
Hazardous Substance Financial Management - Headquarters	53.9	56.9	56.9	56.9	0.0
Hazardous Substance Financial Management Regions	86.5	100.9	100.9	100.9	0.0
Hazardous Substance Administrative Management - Headquarters	152.7	61.2	52.6	52.6	0.0
Hazardous Substance Administrative Management - Regions	114.9	68.8	68.8	68.8	0.0
Hazardous Substance - Contracts and Grants - Headquarters		131.6	139.2	139.2	0.0
Hazardous Substance - Contracts and Grants - Regions		57.0	57.0	57.0	0.0
Hazardous Substance Legal Services - Headquarters	10.3	12.0	12.0	12.0	0.0
Hazardous Substance Legal Services - Regions	27.2	25.9	25.8	25.9	.1

SUPERFUND
Management and Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
Hazardous Substance Office of the Inspector General	53.4	67.8	67.8	84.8	17.0
Hazardous Substance Office of Policy, Planning And Evaluation	11.5	12.8	13.1	13.1	0.0
Hazardous Substance Office of the Comptroller	9.5	13.9	13.9	13.9	0.0
Hazardous Substance - Executive Offices	1.1	2.5	11.3	11.4	.1
Hazardous Substance ORD Management & Support Development - Lab Support			1.8	1.8	0.0
TOTAL WORKYEARS	521.0	611.3	621.1	638.3	17.2

SUPERFUND

Management and Support

Budget Request

The Agency requests a total of $128,210,000 supported by 638.3 total workyears in 1991 all of which will be used for the Hazardous Substance Superfund appropriation. This represents an increase of $15,296,700 and 17.2 total workyears from 1990.

HAZARDOUS SUBSTANCE FINANCIAL MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $9,756,900 supported by 56.9 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $765,800 and no increase in total workyears from 1990. This will provide for the implementation and maintenance of an automated nationwide document storage and retrieval system and an increased cost recovery program.

The program will continue to provide the level of Headquarters financial management support necessary to ensure the financial integrity of Superfund site-specific cost accounting data. This encompasses the review and reconciliation of Headquarters site-specific documents as they are being processed to assure that the information is accurate as well as to assure that it is entered into the Integrated Financial Management System accurately. It also includes monitoring of Headquarters costs charged to site-specific accounts by EPA employees, other Federal agencies, state and local governments, and commercial entities to ensure that amounts are properly documented and within budget. The program will also calculate and apply indirect cost rates to assure that full Agency costs are charged to sites and claimed in cost recovery actions. In addition, the program will provide for basic financial services including payroll support, invoice and voucher processing, reports preparation, and funds control for Headquarters.

1990 Program

In 1990, the Agency is allocating a total of $8,991,100 supported by 56.9 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources provide for basic financial services and the purchase of an automated document collection and retrieval system that is necessary to maintain pace with the increased requests for cost documentation. These resources also provide for the establishment of current cost documentation files in Headquarters so that costs claimed in cost recovery litigation can be supported immediately. This is particularly important in bankruptcy cases where time is of the essence. In the past, an extensive manual file search has been necessary to gather documents that support costs being claimed. In addition, these resources provide for an enhanced level of review and reconciliation to ensure the integrity of Headquarters charges posed against site-specific accounts in the Integrated Financial Management System.

1989 Accomplishments

In 1989, the Agency obligated a total of $8,228,800 supported by 53.9 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. These resources provided for site-specific accounting support and preparation of cost recovery documentation. Also provided were basic financial services for the Superfund program such as payroll and invoice processing.

HAZARDOUS SUBSTANCE FINANCIAL MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $6,693,700 supported by 100.9 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $978,300 and no change in total workyears from 1990. This will provide for the collection and verification of regional cost documentation and the reconciliation of these documents with the Integrated Financial Management System on a current basis. This will be done by establishing a cost documentation file in each Region as costs are incurred rather than gathering documentation at a later date. This will allow us to respond immediately with documentation for bankruptcy cases where time is of the essence as well as assure that all documents needed for protracted negotiation or litigation are available when requested. Also included are resources necessary to provide basic financial services to the Regional Superfund program for payroll and voucher processing, funds control and reporting for management and program purposes.

1990 Program

In 1990, the Agency is allocating a total of $5,715,400 supported by 100.9 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources support the enhanced Regional Superfund financial activities, specifically the cost documentation file.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,654,700 supported by 86.5 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. With these resources, the Regional financial management offices provided site-specific accounting support and gathered regional cost documentation as requested by Regional counsel when cases entered the negotiation or litigation phases. Also provided were basic financial services for the Regional Superfund program, such as payroll and invoice processing and reporting.

HAZARDOUS SUBSTANCE ADMINISTRATIVE MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $3,903,000 supported by 52.6 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $51,300 and no workyears from

1990. We will continue to effectively manage automated systems, provide recruitment, staffing, and classification activities and provide sufficient facilities management to support the overall Superfund program. We will develop health and safety training courses, implement specialized medical monitoring programs, and verify through technical support and environmental audits that Superfund waste handled by EPA Laboratories is disposed in accordance with the off-site disposal requirements of the statute.

1990 Program

In 1990, the Agency is allocating a total of $3,851,700 supported by 52.6 total workyears for this program, all of which is from the Hazardous Substance Response Superfund appropriation. These resources enable the program to provide centralized administrative and management services to Superfund activities. We will provide for the intense and specialized training needs of Superfund employees, and provide management and organizational analysis to strengthen Superfund management processes. These resources will provide technical support, guidance, training, and oversight to ensure that Superfund waste from EPA labs is properly managed. We also plan to create a database on protective clothing to enhance the health and safety of our employees. Resources are used to revise or develop information systems including systems to track hazardous substance release at Federal Facilities, and the administrative/financial systems used to manage the Superfund Program.

1989 Accomplishments

In 1989, the Agency obligated a total of $10,093,500 supported by 152.7 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. These resources enabled the Agency to award and administer the contracts and cooperative and interagency agreements required to carry out emergency, enforcement, and remedial response activities and provided central technical support for developing, operating, and maintaining all automated Superfund information systems. The Agency completed environmental audits at EPA laboratories to document the procedures for the disposal of Superfund waste. We provided training to EPA labs on these requirements and developed improved chemical protective clothing information. We also refined health and safety standards and procedures, and maintained and supported the Agency human resources requirements of the Superfund program staff.

HAZARDOUS SUBSTANCE ADMINISTRATIVE MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $3,812,900 supported by 68.8 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $357,900 and no change in total workyears from 1990. This change represents increases in personnel and expense costs, increased costs of regulating Superfund clean-up sites, and increased travel and training costs. Regional administrative management activities will include: continuing recruitment of personnel to work in the area of hazardous waste, assuring a reliable health and safety and environmental compliance program, providing adequate ADP technical assistance to support the site-specific record keeping requirements of the Superfund program and improved information systems for EPA and state operations.

1990 Program

In 1990, the Agency is allocating a total of $3,455,000 supported by 68.8 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources provide Regional Superfund administrative support services for personnel, health and safety, environmental compliance of EPA facilities, and information management activities. The program is placing special emphasis on efforts to recruit properly qualified personnel and to provide for the intense and specialized training needs of Superfund employees. Increased efforts are also underway in the area of information resources management to efficiently respond to increasing program demands for staff support.

1989 Accomplishments

In 1989, the Agency obligated a total of $4,767,900 supported by 114.9 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. These resources provided a full complement of administrative management services to the Regional Superfund program, including contracting and procurement, personnel, health and safety, and information management activities.

HAZARDOUS SUBSTANCE CONTRACTS AND GRANTS MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $11,027,100 supported by 139.2 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $768,500 and no workyear change over the 1990 program. These resources will provide for increased award and active management of a large number of complex contracts as well as provide support for Superfund enforcement efforts. Quality control over contracts with increasingly high obligation amounts includes the development and implementation of strong conflict of interest guidelines and procedures. Current resources will allow continued improvements in Superfund contract management initiatives. The increased resources will provide more effective assistance and contracts management through greater outreach to the Regions and states; ensure a more aggressive Superfund cost-recovery documentation effort; support more oversight, training and technical assistance to our Federal partners; and develop and refine policy guidance and procedures for more complex procurement needs and cooperative and interagency agreements and new grant programs. In Grants management, we will implement the final Superfund regulation, and continue to increase efforts to combat fraud, waste, and abuse in Superfund Federal assistance and procurement programs.

1990 Program

The Agency is allocating a total of $10,258,600 supported by 139.2 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. We will continue to effectively award and manage increasing numbers of contracts as well as assure quality control over contracts with high obligation amounts. In grants management, we will continue to award and manage Superfund cooperative agreements, grants and Superfund Interagency Agreements, develop suspension and debarment cases, implement an automated Superfund Interagency Management System, and develop a training curriculum for Regional grant personnel.

1989 Accomplishments

Resources for this program resided in Hazardous Substance Administrative Management - Headquarters in 1989.

HAZARDOUS SUBSTANCE CONTRACTS AND GRANTS MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $2,908,800 supported by 57.0 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $269,500 and no change in total workyears over the 1990 program. This change represents increases in personnel and expense costs, increased costs of regulating Superfund clean-up sites, and increased travel and training costs. This program provides the Regional Superfund program offices with procurement and contracts management support for the remedial and removal programs. The Superfund Regional Contracting Officer program will continue to provide the Regional Superfund Program offices with essential contracting expertise needed to actively manage the existing contracts and place new contracts for the emergency and remedial response programs. Documentation and strong management and financial controls will be critical for enforcement and cost recovery efforts. The grants program awards, administers and manages complex Superfund cooperative and interagency agreements and grants for emergency and remedial response activities. Special emphasis will be placed on accountability and ensuring that every Superfund assistance award complies with regulatory and policy requirements and that recipients have the financial, procurement and property systems to account for and safeguard Federal funds.

1990 Program

In 1990, the Agency is allocating a total of $2,639,300 and 57.0 total workyears from the Hazardous Substance Superfund appropriation. These resources provide the Regional Superfund program offices with procurement and contracts management support for the remedial and removal programs and grants management to effectively award, administer and manage Superfund cooperative and interagency agreements. The Regional Grants Management offices will also finalize implementation of an automated grant document and an Interagency Agreement Management System.

1989 Accomplishments

Resources for this program resided in Hazardous Substance Administrative Management-Regions in 1989.

HAZARDOUS SUBSTANCE SUPPORT SERVICES - HEADQUARTERS

1991 Program Request

The Agency requests a total of $40,000,900 for this program, $39,212,900 of which will be for the Hazardous Substance Superfund Appropriation and $788,000 for the Inspector General appropriation. This represents an increase of $3,557,000 in the Hazardous Substance Superfund appropriation and $788,000 in the Inspector General appropriation from 1990. The increase reflects the additional management and support required for the operation of an expanding Hazardous Substance Response program. It also provides for inflation/contract rate increases and telecommunications requirements associated with regional moves. These resources will fund the Hazardous Substance Response program's share of Headquarters and Agency-wide costs. These costs will include: facilities rental, Federal Telecommunications System, revisions and development of information systems, utilities, local telephone services, printing and copying, postage, other building and office services, and health and safety training.

1990 Program

In 1990, the Agency is allocating a total of $35,655,900 for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources fund support costs in Headquarters which include facilities rental, FTS, utilities, local telephone, and other related services.

1989 Accomplishments

In 1989, the Agency obligated a total of $30,741,400 for this program, all of which was from the Hazardous Substance Superfund appropriation. These resources were the Superfund program's share of the Agency management and support costs needed to operate the Headquarters operations, which included facilities rental costs, utilities, telephone charges, and other services.

HAZARDOUS SUBSTANCE SUPPORT SERVICES - REGIONS

1991 Program Request

The Agency requests a total of $17,337,900 for this program, all of which will be for the Hazardous Substance Superfund Appropriation. This represents an increase of $2,977,000 from 1990. This increase will provide for inflation and contract rate increases, Regional moves, purchase of ADP equipment and operation/maintenance costs for the Edison T&E Facility. This will also support the operation of the Hazardous Substance Response program and will cover utilities, local telephone service, printing and copying, minicomputer operations, equipment maintenance, and all other support services related to the Superfund program activities in the Regions.

1990 Program

In 1990, the Agency is allocating a total of $14,360,900 for this program, all of which is from the Hazardous Substance Superfund appropriation. This program provides for utilities, local telephone service, printing and copying, minicomputer operations, equipment maintenance, and all other support services related to the Superfund program activities in the Regions.

1989 Accomplishments

In 1989, the Agency obligated a total of $18,722,400 for this program, all of which was from the Hazardous Substance Superfund appropriation. This program provided for utilities, local telephone service, printing and copying, minicomputer operations, equipment maintenance, and all other support services related to the Superfund program activities in the Regions.

HAZARDOUS SUBSTANCE COMPUTER SERVICES

1991 Program Request

The Agency requests a total of $11,699,800 for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $1,711,900 which will be used to support the additional ADP requirements for the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS), and the Superfund Contract Laboratory Program data systems. These resources will provide centralized computing services to the Hazardous Substance Response Program by the Agency's National Computer Center in Research Triangle Park, North Carolina. These fund a portion of the Center's costs for equipment, telecommunications, operating software purchases, maintenance, and facility operations.

1990 Program

In 1990, the Agency is allocating $9,987,900 for this program, all of which is from the Hazardous Substance Superfund appropriation. This amount reflects an increase in the size and use of Hazardous Substance Response program data bases and the Agency's administrative support of the program.

1989 Accomplishments

In 1989, the Agency obligated a total of $9,247,800 for this program, all of which was from Hazardous Substance Superfund appropriation. The program provided computer services to the Hazardous Substance Response program.

HAZARDOUS SUBSTANCE LEGAL SERVICES - HEADQUARTERS

1991 Program Request

In 1991, the Agency requests a total of $910,300 supported by 12.0 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $116,000 and no change in total workyears from 1990. The increase will provide for increased personnel and support costs.

The Office of General Counsel (OGC) will provide legal advice and consultation on matters related to the implementation of the Superfund program. The OGC will support the Agency's promulgation of rules, establishment of policy and preparation of guidance documents for program implementation of the Superfund program. This includes legal support to financial and administrative operation of Superfund, including contract law, audits, cooperative agreements and FOIA. The OGC handles Superfund litigation in which the Agency is a defendant.

1990 Program

In 1990, the Agency is allocating a total of $794,300 supported by 12.0 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. The OGC is providing advice and consultation on guidance on program matters such as interpretation of the statute, development of regulations, and changes to the National Contingency Plan; and defense of the Agency in any litigation brought against it concerning CERCLA.

1989 Accomplishments

In 1989, the Agency obligated a total of $792,700 supported by 10.3 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. The OGC provided legal guidance in program matters such as statutory interpretation, development of response priorities, review of proposed regulatory actions, and defense of the Agency where litigation had been brought against it concerning CERCLA.

HAZARDOUS SUBSTANCE LEGAL SERVICES - REGIONS

1991 Program Request

In 1991, the Agency requests a total of $1,173,000 supported by 25.9 total workyears for this program, all of which will be for the Hazardous Substance Superfund Appropriation. This represents an increase of $62,800 and an increase of 0.1 total workyears from 1990.

The Offices of Regional Counsel will provide legal advice and consultation on matters related to the implementation of the Superfund program to the Regional Administrators, Regional Superfund managers and State agencies. Principal activities will be the defense of the Agency in CERCLA litigation filed against it, participation in formal administrative proceedings, review of state cooperative agreements, activities relating to access by the public to EPA held information, development of the administrative record for the selection of cleanup remedies, legal support to program response activities, and the provision of a wide variety of legal counsel and advice to Regional, state, and local program officials.

1990 Program

In 1990, the Agency is allocating a total of $1,110,200 supported by 25.8 total workyears for this program, all of which is from the Hazardous Substance Superfund Appropriation. The Offices of Regional Counsel will continue to represent the Agency in regional defensive litigation concerning Superfund. In addition, the Offices of Regional Counsel will provide legal assistance by reviewing state cooperative agreements for legal sufficiency; advising state agencies regarding the legal requirements of the Superfund program; determining eligible uses of the Fund; and advising on the treatment of requests for EPA held information.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,077,600 supported by 27.2 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. The Offices of Regional Counsel provided EPA and state agencies with legal advice and consultation on matters related to the implementation of CERCLA. Principal activities of the Offices of the Regional Counsel included the conduct of defensive litigation, legal review of cooperative agreements with states for site cleanup, and general legal support to the Superfund program in the Regions.

HAZARDOUS SUBSTANCE TRUST FUND - OFFICE OF INSPECTOR GENERAL

1991 Program Request

The Agency requests a total of $12,318,400 supported by 84.8 total workyears for this program all of which will be for Hazardous Substance Trust Fund portion of the Inspector General appropriation. This represents an increase of $2,260,500 and 17.0 total workyears in support of the Inspector General's efforts to perform audits on needs identified in the 1988 Superfund Strategic Audit Plan modified to reflect new statutory requirements, Agency changes in Superfund operations, and our audit experience. We will use these resources to (1) audit critical Superfund remedial activities contracts such as Alternative Remedial Contract Strategy contracts and subcontracts; (2) obtain engineers and scientists to focus on complex, highly technical Superfund remedial investigations/ feasibility studies, and provide critically needed assistance to auditors and investigators on follow-on audits of Superfund removal activities, unannounced site visits, and construction phase of maturing remedial activities program; and (3) investigate allegations of criminal activity and wrongdoing that have a high potential for prosecution.

The OIG performance audits will emphasize (1) policy and program management; (2) remedial cleanup activities; (3) removal responses; (4) enforcement; and (5) program support initiatives. The OIG will expand its external audit coverage as well as provide limited internal audit coverage to examine the economy, efficiency, and effectiveness of the Fund's management. The OIG will continue to investigate referrals of suspected criminal activity with high potential for criminal prosecution. Also, investigative resources will enable the Office of Inspector General to identify and eliminate situations which create the opportunity for fraud and abuse.

1990 Program

In 1990, the Agency is allocating a total $10,057,900 supported by 67.8 total workyears for this program, all of which is from the Hazardous Substance Response Trust Fund appropriation. These resources enable the Office of Inspector General to continue meeting the statutory requirements placed on it by Congress in the Superfund reauthorization. These annual requirements include (1) auditing payments, obligations, reimbursements or other uses of the funds; (2) examining a sample of agreements with States carrying out response actions;

(3) examining remedial investigations and feasibility studies; (4) reviewing the Administrator's status report on all remedial and enforcement actions; and (5) reviewing the Administrator's estimate of the amount of resources necessary for EPA to complete the implementation of its Superfund responsibilities. The OIG will increase its program of external financial audits performed by public accounting firms and other Government audit agencies as well as operate a limited internal performance audit program to examine the economy, efficiency, and effectiveness of the Fund's management. It will investigate referrals of suspected criminal activity with high potential for criminal prosecution and develop and present training for the identification of deficiencies and indicators of wrongdoing.

1989 Accomplishments

In 1989, the Agency obligated a total of $6,612,300 supported by 53.4 workyears for this program, all of which was from the Hazardous Substance Response Trust Fund appropriation. During 1989, the Office of Inspector General issued 61 audit reports on the Fund. Performance audits focused on: improvements in the management of removal actions; and improvements needed in the Agency's accounting for Superfund costs, receivables and property. Superfund audits questioned and recommended cost efficiencies totalling almost $274.5 million of the approximately $800 million audited. Investigative efforts resulted in the identification of several major schemes in connection with cleanup actions that are being pursued for both criminal and civil prosecution.

HAZARDOUS SUBSTANCE - OFFICE OF POLICY, PLANNING AND EVALUATION

1991 Program Request

The Agency requests a total of $3,449,600 supported by 13.1 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $238,600 and no change in total workyears from 1990. The increase results from the one-time reductions in 1990 associated with sequestration and Section 517.

In 1991, the Office of Policy Analysis (OPA) will provide analysis to support the renewed strategy for Superfund, e.g., worst sites first and enhanced enforcement, and will identify issues for Superfund Amendment and Reauthorization Act (SARA) reauthorization. Studies will be conducted using historical data to develop models and approaches to reduce costs and time invested in site studies, assure a reasonable relationship between risk reduction and cost effectiveness, and augment and induce consistent, effective use of enforcement tools (i.e., penalties, unilateral orders, cost recovery).

The Office of Regulatory Management and Evaluation (ORME)-formerly the Office of Standards and Regulations (OSR)-will provide statistical support to the program offices, completing the third and fourth guidance manuals for determining when cleanup at Superfund sites meets applicable standards, and will begin provision of training and assistance in the use of the manuals.
ORME will provide consultation on Superfund problems amenable to statistical solution and will implement statistical methods developed for cost-effective allocation of enforcement resources in Superfund activities. ORME will ensure compliance of Superfund regulatory and policy documents with all applicable

requirements, and support negotiation in rulemaking and broader application of consensus-building techniques.

The Office of Pollution Prevention (OPP)-formerly the Office of Management Systems and Evaluation (OMSE) - will complete development of environmental indicators to support measuring environmental progress for the Superfund program nationwide. OPP will continue to support the Agency's planning and performance measurement management systems as they relate to the Superfund program.

1990 Program

In 1990, the Agency is allocating a total of $3,211,000 supported by 13.1 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation.

OPA continues policy development and analysis of effects of the revised National Contingency Plan (NCP) on program/enforcement implementation under the SARA of 1986. It remains involved in the development, review, and analysis of policy proposals, including extensive workgroup participation. OPA is analyzing the potential for a cost-effective risk reduction model; studying new alternatives to reduce time and cost of Superfund studies; assessing impacts of hazardous waste cleanup on national technical and human resources; analyzing and developing approaches to enhance enforcement; and analyzing the use and effectiveness of institutional controls at Superfund sites.

OSR continues to provide statistical support to the program office, designing statistical methodologies for Superfund site characterization and developing guidelines for evaluating attainment of standards in additional media at disposal sites. In the information policy area, OSR is initiating development of expert system-based electronic data collection instruments which will replace previously used paper forms, build in data quality and control, and provide data in an electronic medium readily transferred to program office data bases. Regulatory innovations are fostering greater participation by potentially responsible parties (PRPs) and states in cleanups, increased use of innovative technology, and consideration of wetland restoration by PRPs through mitigation banks.

OMSE is developing Superfund indicators and providing support for the Agency's planning and performance measurement management systems as they relate to the Superfund program.

1989 Accomplishments

In 1989, the Agency obligated a total of $3,332,800 supported by 11.5 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation.

OPA concentrated on policy development as the Superfund program implemented the 1986 amendments and the revised NCP. It worked on the development, review, and analysis of policy proposals, including extensive workgroup participation; conducted comprehensive analysis of Superfund risk data; assisted the Regions in implementing risk assessment methodologies and decision-making processes; evaluated the impact of the amendments and the revised NCP on remedy decisions;

and analyzed the role of states and citizens in the Superfund process as an adjunct to OMSE studies.

OSR continued development of statistical guidance for determining attainment of cleanup standards at Superfund sites, supported enforcement of Superfund site cleanup, and provided statistical consultation on complex or unique problems. OSR's efforts to develop innovative approaches to implementation of Superfund included application of alternative dispute resolution to expedite Superfund settlements and fostering of innovative cleanup technologies.

OMSE worked with the program office to identify and study Superfund implementation issues to provide options for overcoming obstacles to effective implementation of the Superfund program. The Superfund Indicators Demonstration Project continued with focus groups including the public, the Congress, and other interest groups to test the usefulness of measures for communicating progress. OMSE evaluation studies included identifying and overcoming managerial, organizational and institutional factors that adversely affect implementation of the Superfund program. OMSE also studied the feasibility of evaluating EPA's efforts to improve states' ability to deal with hazardous waste.

HAZARDOUS SUBSTANCE - OFFICE OF THE COMPTROLLER

1991 Program Request

The Agency requests a total of $1,481,000 supported by 13.9 total workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $490,100 from 1990. These increases reflect the management and support required for an expanding Hazardous Substance Response program, and expansion of the Agency's Productivity fund. These resources will support: the preparation of the Agency's budget submissions to the Office of Management and Budget (OMB) and Congress; response to Congressional inquiries; analysis and review of major issues concerning workload and pricing models; analysis of on-going resource issues related to the operation and management of the Trust Fund; and internal controls of Superfund finances.

1990 Program

In 1990, the Agency is allocating a total of $990,900 and 13.9 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources support on-going budget activities, responses to Congressional inquiries, and analysis of on-going resource issues.

1989 Accomplishments

In 1989, the Agency obligated a total of $607,000 and 9.5 total workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. The Office of the Comptroller coordinated and prepared the OMB and Congressional budget submissions, responded to Congressional inquiries, and provided fund oversight activities including on-going resource reviews for the Superfund program. In addition, the program conducted in-house studies on site-specific charging.

HAZARDOUS SUBSTANCE - EXECUTIVE OFFICES

1991 Program Request

The Agency requests a total of $1,022,600 supported by 11.4 total workyears for this program, all of which is for the Hazardous Substance Superfund appropriation. This represents a decrease of $278,000 and an increase of 0.1 workyear from 1990. These resources will include support for the National Environmental Service Officer (NESO) located within the Office of Regional Operations and State/ Local Relations. The NESO will conduct management reviews of Environmental Services Divisions (ESDs); develop Headquarters guidance to ensure efficiency in the use of resources and improved planning/procurement system; represent ESDs in the Superfund program planning and budget activities including workload model development; ensure Superfund policies are effectively communicated to ESDs; schedule and convene quarterly ESDs conferences; plan, schedule and convene meetings of the Superfund Analytical Services Advisory Committee; evaluate options for securing the most effective lab support to meet Superfund goals; and review ESD lab capabilities and their cost effectiveness. In addition, the Office of the Administrator will continue to use existing, and develop new, communication vehicles to exchange information on acute hazardous National Priority List (NPL) site activity, emergency planning, chemical release information, and enforcement activity. The Office will also continue to work closely with the Regions and newly established emergency response commissions and local emergency planning committees, and other citizen groups in site activities. This program will also assist Federal agencies in addressing and documenting over 3,000 sites in an EPA Federal agency hazardous waste docket, as well as prepare guidance and technical assistance documents to assess sites in the docket and, if listed on the NPL, to begin remediation efforts. Also, grants training will be funded for small and minority contractors for cleanup areas.

1990 Program

In 1990, the Agency is allocating a total of $1,300,600 supported by 11.3 total workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. The NESO will continue to provide the ESDs with Headquarters policy guidance, oversight, and management support, in areas affecting both ESDs and Superfund. In addition the Office of the Administrator is supporting the Regions and assisting states and localities with plans to respond to chemical emergencies. The Office is playing a critical role in exchanging information with local health professionals, public safety officials, local government and state government officials. Also, training is being provided for small and minority contractors for cleanup areas.

1989 Accomplishments

In 1989, the Agency obligated a total of $409,400 supported by 1.1 total workyears, all of which was from the Hazardous Substance Superfund appropriation. The Office coordinated the identification of inactive sites with other Federal agencies; provided a wide variety of communication support, including the development of fact sheets and publications; developed Section 120 implementation guidance and policies related to Federal sites and played an active role in assisting agencies in meeting Superfund Amendments and Reauthorization Act (SARA) requirements; and worked on information exchange with state and local governments. In addition, the program provided the ESDs with policy guidance, oversight, and management support; identified hazardous waste sites, provided sample and site tracking, and developed a national equipment planning and procurement process for ESDs to meet Superfund and other Agency needs.

HAZARDOUS SUBSTANCE - OFFICE OF RESEARCH AND DEVELOPMENT - MANAGEMENT AND SUPPORT

1991 Program Request

The Agency requests a total of $714,100 and 1.8 workyears for this program, all of which will be for the Hazardous Substance Superfund appropriation. This represents an increase of $181,500. This increase reflects the increased costs of operation. These resources will provide essential management support services for remote laboratories of the Office of Research and Development (ORD) which conduct research on hazardous substances. These resources will fund facilities operation and maintenance, utilities and equipment operations, rental costs, and other support costs essential for the management operation and maintenance of ORD's remote laboratories that support Superfund research.

1990 Program

In 1989, the Agency is allocating a total of $532,600 and 1.8 workyears for this program, all of which is from the Hazardous Substance Superfund appropriation. These resources provide essential services, as described above, required to operate and maintain ORD's remote laboratories in support of Superfund research.

1989 Accomplishments

In 1989, the Agency obligated $220,200 and no workyears for this program, all of which was from the Hazardous Substance Superfund appropriation. This funding provided the essential ORD laboratory support services associated with the Superfund research program.

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LEAKING UNDERGROUND STORAGE TANK

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
APPROPRIATION					
Leaking Underground Storage Tanks Trust	$50,875.4	$74,822.0	$74,097.0	$75,000.2	$903.2
Office of Inspector General				$574.8	$574.8
TOTAL, Leaking Underground Storage Tank Trust	$50,875.4	$74,822.0	$74,097.0	$75,575.0	$1,478.0
PERMANENT WORKYEARS	77.7	91.3	85.7	93.9	8.2
TOTAL WORKYEARS	82.4	91.3	91.3	93.9	2.6
OUTLAYS	$32,859.0	$35,707.0	$35,489.0	$49,645.0	$14,156.0
AUTHORIZATION LEVELS	The Superfund Amendments and Reauthorization Act (SARA) of 1986, established the Leaking Underground Storage Tanks Trust Fund and authorizes a total of $500,000,000 to be appropriated to this fund from 1987 to 1991.				

LEAKING UNDERGROUND STORAGE TANKS

OVERVIEW AND STRATEGY

The goal of Subtitle I of the Hazardous and Solid Waste Amendments of 1984 (HSWA), as amended by the Superfund Amendments and Reauthorization Act of 1986, is to ensure the timely and appropriate remediation of facilities with leaking underground storage tanks containing petroleum. Owners and operators of underground storage tanks (UST) facilities have primary responsibility for response actions to address leaking tanks,and they must maintain evidence that they are financially capable of implementing corrective action. The Agency's primary objective is to implement the Leaking Underground Storage Tank (LUST) program and administer the LUST Trust Fund through cooperative agreements with the states. The Agency will conduct Federal response only under limited circumstances.

The LUST Trust Fund is financed through a Federal tax on petroleum products, and it may be used to: 1) identify owners/operators; 2) take enforcement actions to compel owners/operators to conduct response actions; 3) perform necessary response actions when the tank is abandoned or the owner/operator is unable or unwilling to take action; and 4) pursue cost recovery of Fund-financed cleanups from owners/operators. The LUST program provides an incentive for states to recover funds expended on direct state cleanups -- recovered Trust funds remain at the state level and may be used for other eligible activities under state cooperative agreements.

The Agency's national LUST program management approach is based on private industry's franchise concept. This means that the Agency provides financial, management, technical, and outreach assistance, while the states are primarily responsible for implementing the LUST program under national program guidance.

EPA negotiates cooperative agreements annually with the states to plan, develop, administer, and enforce the LUST cleanup program. This highly successful management approach has resulted in 54 of the 56 states and territories signing cooperative agreements to undertake the cleanup program.

By 1991, most state LUST programs will have developed response and enforcement capabilities. As the deadlines for meeting leak detection regulations, which require owners/operators to gradually institute an approved method of leak detection on all of their USTs, continue to be phased-in, an increasing number of tank releases are expected to be discovered and reported. The state programs supported under the Trust Fund will continue to focus on conducting the necessary compliance and enforcement work to get owners and operators to take corrective action. EPA will continue to provide national guidance and scientific and management support to the states.

Continue to Build and Implement Strong State Programs

The LUST request for 1991 is based on two major factors. First, the number of leaks reported is expected to grow because of the continued phase-in of Federal leak detection requirements. While the Agency is expecting that the majority of leaks will be addressed by owners/operators, continued funding is necessary to enable states to conduct site investigations and to oversee owner/operator cleanups.

Second, with resources provided through cooperative agreements, nearly all states are expected to have achieved the response and enforcement capacity necessary to implement their programs. Therefore, in developing these agreements, the Agency will target resources for both enforcement and response actions.

The Agency, in its franchising role, will continue to develop and distribute practical program management tools for state and local governments, including improved techniques for corrective action and assistance with achieving compliance. Regions will identify specific program management processes which can be improved and will provide on-going technical information, assistance, and training support to the states.

Improve and Strengthen Enforcement

The Agency will continue to develop enforcement tools to assist states in implementing the LUST program. The program will emphasize improving the quality of corrective actions, reviewing corrective action plans, and identifying and approving long-term monitoring needs. Headquarters will develop effective tools to assist states in improving the responsiveness of owners/operators. Regional staff will continue to provide technical assistance for state enforcement.

Provide Scientific Support for Field Response Actions

The Agency will provide technical support to the states and local agencies responsible for the implementation of the LUST Trust Fund program. Technical support will focus on providing scientific expertise on more rapid and lower cost approaches for assessing site contamination and evaluating improved methods for response technologies.

Continue Efficient Management Support

Management and Support will continue to assist the LUST program by providing accurate and timely financial services, effective budgeting and funds control, efficient contracts management, and centralized personnel services.

LUST Audit Support

The Office of the Inspector General will provide oversight of the Agency and states in implementing the LUST program. The Office of the Inspector General will initiate performance and financial audits, and investigations to ensure that the program is being properly managed and to identify possible deficiencies.

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LEAKING UNDERGROUND STORAGE TANK TRUST FUND
LUST Technical Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
	(DOLLARS IN THOUSANDS)				
PROGRAM					
Environmental Engineering & Technology - LUST					
Leaking Underground Storage Tanks Trust	$757.8	$761.6	$754.2	$767.9	$13.7
TOTAL	$757.8	$761.6	$754.2	$767.9	$13.7
TOTAL:					
Leaking Underground Storage Tanks Trust	$757.8	$761.6	$754.2	$767.9	$13.7
LUST Technical Support TOTAL	$757.8	$761.6	$754.2	$767.9	$13.7
PERMANENT WORKYEARS					
Environmental Engineering & Technology - LUST	1.9	2.0	2.0	1.9	-.1
TOTAL PERMANENT WORKYEARS	1.9	2.0	2.0	1.9	-.1
TOTAL WORKYEARS					
Environmental Engineering & Technology - LUST	1.9	2.0	2.0	1.9	-.1
TOTAL WORKYEARS	1.9	2.0	2.0	1.9	-.1

LEAKING UNDERGROUND STORAGE TANKS

Principle Outputs by Objective

Objective 1: Leaking Underground Storage Tank Trust Fund Technical Support.

1991: o Report on the field evaluation of soil washing technology at a LUST site of opportunity

o Field evaluation of soil vapor extraction screening and design model

o Development and evaluation of soil vapor extraction "enhancements/co-treatment techniques"

1990: o Report on the application (Screening/Protocol) of soil washing technology at LUST sites

o Technical assistance documents on soil vapor extraction technology application, design and evaluation at LUST sites.

o Feasibility evaluation of the application of electro-osmosis and low temperature thermal desorption technologies for LUST sites.

1989: o Development and demonstration of UST corrective action case histories database system

o Reports on site assessment and selection of treatment technologies for corrective actions in the unsaturated and saturated zones at LUST sites.

o Workshop/Proceedings on the application of soil vapor extraction technology to LUST sites

LEAKING UNDERGROUND STORAGE TANK (LUST) TRUST FUND

LUST Technical Support

Budget Request

The Agency requests a total of $767,900 supported by 1.9 total workyears all of which will be for the Leaking Underground Storage Tank (LUST) Trust Fund. This represents an increase of $13,700 and a decrease of 0.1 workyears from 1990. The increase will fund increased personnel and support costs.

Program Objective

This program provides technical support to Federal, state, and local agencies implementing the Leaking Underground Storage Tank (LUST) Trust Fund Program.

Objective 1: LUST Trust Fund Technical Support. These activities provides technical support to EPA's Office of Underground Storage Tanks (OUST), Regions, states, and local agencies implementing the LUST Trust Fund Program. This work contributes to ensuring the selection of the best available site assessment and cleanup procedures by responsible authorities.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1991 Program Request

The Agency requests a total of $767,900 supported by 1.9 total workyears for this program all of which will be for the Leaking Underground Storage Tank Trust Fund. This represents an increase of $13,700 and a decrease of 0.1 FTEs in workyears from 1990. The increase will fund increased personnel and support costs.

In 1991, this program will evaluate selected cleanup technologies developed for petroleum and hazardous chemical releases and demonstrate them at LUST sites. These evaluations are an important form of technical guidance to provide cost-effective corrective actions at LUST sites. Evaluations and demonstrations will focus on soil washing and in-situ soil flushing techniques.

1990 Program

In 1990, the Agency is allocating a total of $754,200 supported by 2.0 total workyears for this program, all of which is from the LUST Trust Fund.

1989 Accomplishments

In 1989, the Agency obligated a total of $757,800 supported by 1.9 total workyears for this program, all of which was from the LUST Trust Fund. The program evaluated and demonstrated RCRA and CERCLA cleanup technologies developed for petroleum and hazardous chemical releases for applicability to petroleum leaks from underground tanks. Case studies of past and on going corrective actions were performed and the outline of a guidance document on site specific procedures for cost-effective corrective actions were prepared.

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LEAKING UNDERGROUND STORAGE TANK TRUST FUND
LUST Guidelines & Implementation

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
		(DOLLARS IN THOUSANDS)				
PROGRAM						
Guidelines & Implementation - LUST Trust Fund GU						
Leaking Underground Storage Tanks Trust		$47,915.7	$71,180.1	$70,331.6	$71,058.0	$726.4
	TOTAL	$47,915.7	$71,180.1	$70,331.6	$71,058.0	$726.4
TOTAL: Leaking Underground Storage Tanks Trust		$47,915.7	$71,180.1	$70,331.6	$71,058.0	$726.4
LUST Guidelines & Implementation	TOTAL	$47,915.7	$71,180.1	$70,331.6	$71,058.0	$726.4
PERMANENT WORKYEARS						
Guidelines & Implementation - LUST Trust Fund GU		60.4	62.0	59.4	62.0	2.6
TOTAL PERMANENT WORKYEARS		60.4	62.0	59.4	62.0	2.6
TOTAL WORKYEARS						
Guidelines & Implementation - LUST Trust Fund GU		63.9	62.0	62.0	62.0	0.0
TOTAL WORKYEARS		63.9	62.0	62.0	62.0	0.0

LEAKING UNDERGROUND STORAGE TANKS (LUST) TRUST FUND

LUST Guidelines and Implementation

Budget Request

The Agency requests a total of $71,058,000 supported by 62.0 total workyears for the Leaking Underground Storage Tanks Trust Fund appropriation.

LUST GUIDELINES AND IMPLEMENTATION

1991 Program Request

The Agency requests a total of $71,058,000 supported by 62.0 total workyears for the 1991 Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $726,400 and no change in total workyears from 1990. This increase will be used to carry out site assessments, enforcement, and corrective action work on Indian lands since these activities are not covered by state programs.

The number of sites requiring response actions will increase as owners/operators continue to install leak detection devices and as insurance companies require testing for leaks prior to issuing owner/operator insurance policies. By 1991, over 60 percent of the 2 million regulated underground storage tanks will have been tested for leaks. As tanks are tested or removed, increasing numbers of leaks will be discovered. The Agency estimates that 80 to 90 percent of the releases discovered will be addressed by the owners/operators of underground storage tank facilities. However, Federal assistance will be necessary to support states as they conduct site investigations based on their priority lists, encourage owners/operators to take appropriate action, and provide oversight of owner/operator responses. Direct state response actions for some sites will require funding from the Federal Trust fund or from state funding sources. When a leak is reported on Indian lands, EPA will provide assistance to tribal leaders in site assessment, compelling and overseeing owner/operator response, and enforcement.

The Agency will continue to support the development and implementation of state response programs through LUST Trust Fund Cooperative Agreements and a variety of mechanisms based on state needs. The Agency will design and disseminate practical tools, techniques, and training (including handbooks and videos) to help the Regions, states, and regulated community to address their on-going workload and to improve performance in the field. EPA will also assist states in developing their own state trust funds to finance responses at abandoned sites or sites where the owner/operator is unable or unwilling to respond. Additionally, EPA will continue to improve cost recovery projects in the states to recover monies expended from the Trust fund. The funds recovered by the states may be utilized to finance other LUST Trust Fund eligible activities and projects.

1990 Program

The Agency is allocating a total of $70,331,600 supported by 62.0 total workyears from the 1990 Leaking Underground Storage Tank Trust Fund appropriation.

The Agency will develop, maintain, and improve the national LUST management system which is composed of state and local programs. The Agency continues to work with the states to improve their performance in site assessments and corrective actions. Specifically, state projects will focus primarily on methods needed to streamline site measurement techniques and to improve the quality of corrective action plans.

The Agency will continue to develop and renew state Trust Fund Cooperative Agreements. The Regions continue to make use of Targeted Improvement Projects (TIPs) to test and disseminate improved tools, methods, and systems to support the response program as it seeks to meet an increasing workload -- resulting from the phasing-in of Federal leak detection and financial responsibility requirements. Current development and pilot work focuses on streamlining the state procedures for site closures, site assessments and corrective action plan review. The Lust Trust Fund will continue to help the states identify and assess leaking tanks sites, and to get owners to respond through a variety of enforcement actions.

1989 Accomplishments

In 1989, the Agency obligated a total of $47,915,700 supported by 63.9 total workyears from the Leaking Underground Storage Tank Trust Fund appropriation.

States have identified sites and encouraged owners/operators to take response actions at their sites. States have also taken enforcement actions to compel owner/operator response. A significant portion of these state efforts are funded through LUST Trust Fund Cooperative Agreements.

The Agency has also conducted a number of pilot projects with states to address specific implementation and field problems, such as improving site assessments and corrective action methods. The Agency has developed an enforcement strategy which focuses on achieving voluntary compliance through the use of innovative and informal enforcement techniques. Although the states have primary enforcement responsibility, support must come from the Agency when necessary.

The Agency oversaw the development and implementation of state response programs, and provided technical assistance to states that needed to develop Cooperative Agreements to enter the program. Agency assistance included the examination of state programs, procedures, mechanisms for addressing releases and the use of appropriate program and fiscal management systems.

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LEAKING UNDERGROUND STORAGE TANK TRUST FUND
LUST Legal Enforcement

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
LUST - Legal Enforcement						
Leaking Underground Storage Tanks Trust		$145.5	$266.1	$278.2	$280.0	$1.8
	TOTAL	$145.5	$266.1	$278.2	$280.0	$1.8
TOTAL:						
Leaking Underground Storage Tanks Trust		$145.5	$266.1	$278.2	$280.0	$1.8
LUST Enforcement	TOTAL	$145.5	$266.1	$278.2	$280.0	$1.8
PERMANENT WORKYEARS						
LUST - Legal Enforcement		2.9	5.6	4.5	5.5	1.0
TOTAL PERMANENT WORKYEARS		2.9	5.6	4.5	5.5	1.0
TOTAL WORKYEARS						
LUST - Legal Enforcement		3.2	5.6	5.6	5.5	-.1
TOTAL WORKYEARS		3.2	5.6	5.6	5.5	-.1

LEAKING UNDERGROUND STORAGE TANK (LUST) TRUST FUND
LUST Legal Enforcement

Budget Request

The Agency requests a total of $280,000 supported by 5.5 total workyears for 1991, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $1,800 and a decrease of 0.1 workyears.

1991 Program Request

The Agency requests a total of $280,000 supported by 5.5 total workyears, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $1,800 and a decrease of 0.1 total workyears from 1990. The workyear decrease reflects a redistribution of workyears within the Agency to accommodate the resource needs of the Office of the Inspector General.

In 1991, Regional legal enforcement staff will provide technical assistance and oversight to States by using informal or expedited enforcement approaches to enhance effective State programs. Minimal Federal oversight and involvement in enforcement actions will also continue. Emphases of the program will be: 1) initiation and follow through of enforcement activity, where a release from an underground storage tank poses a major environmental emergency and 2) pursuit of cost recovery where the LUST Trust Fund has been used for cleanup because owner/operator insurance was inadequate. Federal enforcement actions will be limited. However, there will be some instances where formal enforcement actions (administrative compliance and judicial orders) will be used to compel response actions by recalcitrant owners and operators.

1990 Program

In 1990, the Agency is allocating a total of $278,200 supported by 5.6 total workyears for this program, all of which is from the Leaking Underground Storage Tank Trust Fund appropriation.

Regional legal enforcement staff are providing technical assistance and cost recovery guidance to States, with signed Cooperative Agreements, for enforcement activities. Coordination between States and EPA is required to ensure uniform implementation, particularly regarding issues involving enforcement actions, cost recovery, and financial viability of owners/operators. Resources will strengthen State programs with a view toward increasing compliance with LUST regulations. State Cooperative Agreements, negotiated with EPA, give States authority to determine the need for and type of response actions. The Federal role is to ensure that State enforcement programs comply with regulations and to help identify and resolve State-specific enforcement issues.

1989 Accomplishments

In 1989, the Agency obligated a total of $145,500 supported by 3.2 total workyears from the Leaking Underground Storage Tank Trust Fund appropriation. Workload of Regional legal enforcement staff primarily focused on providing assistance to States in cooperative agreement negotiations.

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LEAKING UNDERGROUND STORAGE TANK TRUST FUND
LUST Management & Support

(DOLLARS IN THOUSANDS)

		ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
PROGRAM						
Policy & Analysis - Office of Policy, Planning & Evaluation						
Leaking Underground Storage Tanks Trust		$300.5	$272.6	$270.0	$276.9	$6.9
	TOTAL	$300.5	$272.6	$270.0	$276.9	$6.9
Adminisrative Management - Office of Administration & Resources Management						
Leaking Underground Storage Tanks Trust		$1,612.0	$2,046.9	$2,198.0	$2,323.5	$125.5
	TOTAL	$1,612.0	$2,046.9	$2,198.0	$2,323.5	$125.5
Legal Services - Office of General Counsel						
Leaking Underground Storage Tanks Trust		$143.9	$294.7	$265.0	$293.9	$28.9
	TOTAL	$143.9	$294.7	$265.0	$293.9	$28.9
Office Of Inspector General - Lust						
Office of Inspector General					$574.8	$574.8
	TOTAL				$574.8	$574.8
TOTAL:						
Leaking Underground Storage Tanks Trust		$2,056.4	$2,614.2	$2,733.0	$2,894.3	$161.3
Office of Inspector General					$574.8	$574.8
LUST Management & Support	TOTAL	$2,056.4	$2,614.2	$2,733.0	$3,469.1	$736.1
PERMANENT WORKYEARS						
Policy & Analysis - Office of Policy, Planning & Evaluation		.8	.3	.3	.3	0.0
Adminisrative Management - Office of Administration & Resources Management		9.8	16.0	15.0	15.4	.4
Legal Services - Office of General Counsel		1.9	5.4	4.5	5.3	.8
Office Of Inspector General - Lust					3.5	3.5
TOTAL PERMANENT WORKYEARS		12.5	21.7	19.8	24.5	4.7

LEAKING UNDERGROUND STORAGE TANK TRUST FUND
LUST Management & Support

	ACTUAL 1989	ENACTED 1990	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
			(DOLLARS IN THOUSANDS)		
TOTAL WORKYEARS					
Policy & Analysis - Office of Policy, Planning & Evaluation	.8	.3	.3	.3	0.0
Administrative Management - Office of Administration & Resources Management	9.8	16.0	15.7	15.4	-.3
Legal Services - Office of General Counsel	2.8	5.4	5.7	5.3	-.4
Office Of Inspector General - Lust				3.5	3.5
TOTAL WORKYEARS	13.4	21.7	21.7	24.5	2.8

LEAKING UNDERGROUND STORAGE TANK (LUST) TRUST FUND

LUST Management and Support

Budget Request

The Agency requests a total of $3,469,100 supported by 24.5 total workyears for 1991, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $736,100 and an increase of 2.8 total workyears from 1990.

POLICY AND ANALYSIS - OFFICE OF POLICY, PLANNING AND EVALUATION

1991 Program Request

The Agency requests a total of $276,900 supported by 0.3 total workyears for this program, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $6,900 and no change in total workyears from 1990. The increase results from the one-time reductions in 1990 associated with sequestration and Section 517.

The Office of Policy Analysis (OPA) will continue its support and development of risk-based decision-making tools (both proactive and reactive) for state underground storage tank (UST) programs to help states target leaking (L)USTs that present the greatest risk. In addition, OPA will evaluate the UST model (i.e., franchise approach, continuous improvement philosophy, Demming management method) to assess whether the successes of the UST program may have some applicability to the Agency's other contaminated media programs.

1990 Program

In 1990, the Agency is allocating a total of $270,000 supported by .3 total workyear for this program, all of which is from the Leaking Underground Storage Tank Trust Fund appropriation.

OPA continues to assist the program in developing a better understanding of the problem created by the approximately 3,400,000 USTs exempt from UST requirements, as well as developing programs to control this problem. OPA also is assisting states in developing better priority-setting and UST classification schemes and tools to improve corrective action decision making. In each of these areas, OPA is refining the tools and methodologies developed in 1989 to improve their usefulness in a different state or local setting, expand upon their current applications to include new ones (e.g., from reactive to proactive priority setting), and evaluate how best to implement, deliver and distribute these to states and possibly local communities.

1989 Accomplishments

In 1989, the Agency obligated a total of $300,500 supported by 0.8 total workyear for this program, all of which was from the Leaking Underground Storage Tank Trust Fund appropriation.

OPA continued its participation on two workgroups -- Financial Responsibility Requirements (FRR) for Petroleum USTs and FRRs for Chemical USTs; and assisted the program with the implementation of Technical Standards Rule. With emphasis shifting from policy development to implementation, it actively assisted the program office in the analysis and evaluation of broad regulatory and LUST Trust Fund issues and played an active role in the development of a report to Congress on exempt farm and heating oil tanks. OPA also continued to implement its LUST workplan, which covered a broad set of issues. These included ground-water protection issues, such as the corrective action decision-making process; and implementation analysis, such as facilitating risk-based decision making in the field of data management tools for state UST programs. OPA also initiated general policy studies, including measuring the LUST program's environmental results.

ADMINISTRATIVE MANAGEMENT - HEADQUARTERS

1991 Program Request

The Agency requests a total of $1,268,600 supported by 8.8 total workyears for this program, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $98,500 and a decrease of .2 total workyears from 1990. These resources will be used to provide support costs such as rent, utilities, security and mail operations for the LUST program and administrative services, such as contracts, grants, health and safety, and environmental compliance, personnel support, and basic financial services such as processing payroll and vouchers, and producing accurate financial reports.

1990 Program

In 1990, the Agency is allocating a total of $1,170,100 supported by 9.0 total workyears for this program, all of which is from the Leaking Underground Storage Tank Trust Fund appropriation. These resources are used to provide support services, financial services, and administrative services as described above.

1989 Accomplishments

In 1989, the Agency obligated a total of $1,179,300 supported by 6.5 total workyears, all of which was from the Leaking Underground Storage Tank Trust Fund appropriation. These resources provided support services, financial services, and administrative services described above.

ADMINISTRATIVE MANAGEMENT - REGIONS

1991 Program Request

The Agency requests a total of $1,054,900 supported by 6.6 total workyears for this program, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $27,000 and a decrease of 0.1 total workyear from 1990. Resources will provide support costs such as rent, utilities, security, and mail operations for the LUST program. Basic grant management services will be provided as well as financial services such as processing payroll and vouchers and providing accurate financial reports.

1990 Program

In 1990, the Agency is allocating a total of $1,027,900 supported by 6.7 total workyears for this program, all of which is from the Leaking Underground Storage Tank Trust appropriation. These resources are used to provide support services and financial/grant services as described above.

1989 Accomplishments

In 1989, The Agency obligated a total of $432,700 supported by 3.3 workyears, all of which was from Leaking Underground Storage Tank Trust Fund appropriation. These resources were used to provide support services and financial/grant services as described above.

LEGAL SERVICES - OFFICE OF GENERAL COUNSEL

1991 Program Request

The Agency requests a total of $293,900 supported by 5.3 total workyears for this program, all of which will be for the Leaking Underground Storage Tank Trust Fund appropriation. This represents an increase of $28,900 and a decrease of 0.4 in total workyears from 1990. The increase reflects increased personnel and support costs.

The resources will provide legal support for the development of guidelines and policies for administration of the Fund, supporting cooperative agreements between EPA and States, providing advice and interpretations, and defense of the Agency in legal actions taken against it regarding the Trust Fund.

1990 Program

In 1990, the Agency is allocating a total of $265,000 supported by 5.7 total workyears for this program, all of which is from the Leaking Underground Storage Tank Trust Fund appropriation.

The request will provide legal support for the development of guidelines and policies for administration of the fund; support cooperative agreements between EPA and States; and provide advice, interpretations, and defense for the Agency in legal actions taken against it regarding the Trust Fund.

1989 Accomplishments

In 1989, the Agency obligated a total of $143,900 supported by 2.8 total workyears, all of which was from the Leaking Underground Storage Tank Trust Fund appropriation. Legal support was provided to the development of guidelines and policies through advice, counsel and interpretations.

LEAKING UNDERGROUND STORAGE TANKS TRUST FUND - OFFICE OF INSPECTOR GENERAL

1991 Program Request

The Agency requests a total of $574,800 supported by 3.5 total workyears for this program all of which will be for Leaking Underground Storage Tanks Trust Fund portion of the Inspector General appropriation. This represents an increase of $574,800 and 3.5 total workyears from 1990. Under the Inspector General Act of 1978, as amended, the Office of Inspector General has authority to inquire into the Agency's program and administrative activities and related activities of all parties performing under contracts, grants, and other agreements with the Agency. The Superfund Amendments and Reauthorization Act of 1986 established the Leaking Underground Storage Tanks Trust fund and authorizes a total of $500,000,000 to be appropriated to this fund from 1987 to 1991. We have not audited the trust fund activities in prior years in order to give the Agency adequate lead time to get the program underway. The resources requested will be used by the Office of Inspector General to initiate audits of the Agency's progress in implementing the program and the Leaking Underground Storage Tanks Trust fund's financial statements to ensure the program is being properly managed, and to conduct investigations related to the fund.

1990 Program

In 1990, there were no requests for funding or workyears for audits or investigations of this program.

1989 Accomplishments

In 1989, no funds were obligated for this program. We conducted a preliminary audit of the Leaking Underground Storage Tank program to assist management in identifying improvements in the program. The audit identified recommended efficiencies of $901,310. Based on this initial audit, we believe additional audits are necessary as the program matures.

ENVIRONMENTAL PROTECTION AGENCY

SPECIAL ANALYSIS

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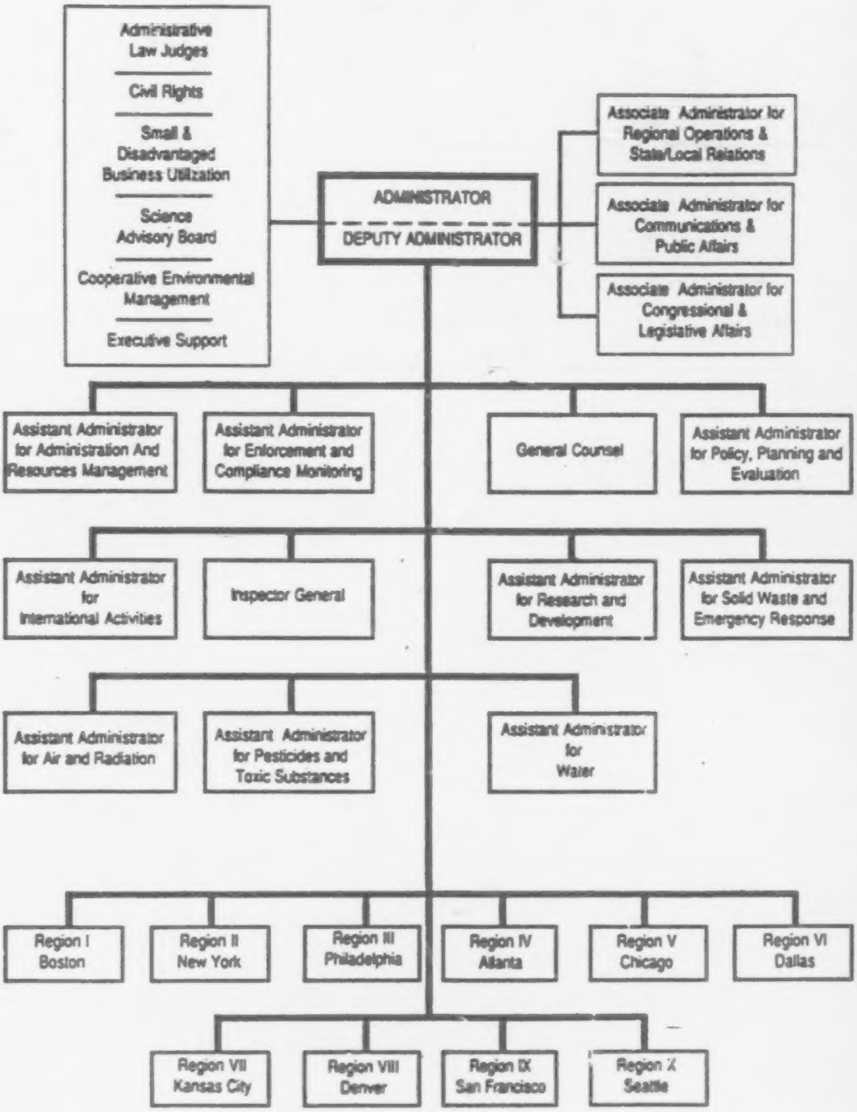
U.S. Environmental Protection Agency


Administrative Law Judges
Civil Rights
Small & Disadvantaged Business Utilization
Science Advisory Board
Cooperative Environmental Management
Executive Support
ADMINISTRATOR
DEPUTY ADMINISTRATOR
Associate Administrator for Regional Operations & State/Local Relations
Associate Administrator for Communications & Public Affairs
Associate Administrator for Congressional & Legislative Affairs
Assistant Administrator for Administration And Resources Management
Assistant Administrator for Enforcement and Compliance Monitoring
General Counsel
Assistant Administrator for Policy, Planning and Evaluation
Assistant Administrator for International Activities
Inspector General
Assistant Administrator for Research and Development
Assistant Administrator for Solid Waste and Emergency Response
Assistant Administrator for Air and Radiation
Assistant Administrator for Pesticides and Toxic Substances
Assistant Administrator for Water
Region I Boston
Region II New York
Region III Philadelphia
Region IV Atlanta
Region V Chicago
Region VI Dallas
Region VII Kansas City
Region VIII Denver
Region IX San Francisco
Region X Seattle

ENVIRONMENTAL PROTECTION AGENCY

REGIONS

Locations and States

Region I	Headquarters, Boston, Massachusetts Connecticut, Maine, Massachusetts New Hampshire, Rhode Island, Vermont
Region II	Headquarters, New York, New York New Jersey, New York, Puerto Rico Virgin Islands
Region III	Headquarters, Philadelphia, PA Delaware, District of Columbia, Maryland Pennsylvania, Virginia, West Virginia
Region IV	Headquarters, Atlanta, Georgia Alabama, Florida, Georgia, Kentucky Mississippi, North Carolina, South Carolina, Tennessee
Region V	Headquarters, Chicago, Illinois Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
Region VI	Headquarters, Dallas, Texas Arkansas, Louisiana, New Mexico, Oklahoma, Texas
Region VII	Headquarters, Kansas City, Kansas Iowa, Kansas, Missouri, Nebraska
Region VIII	Headquarters, Denver, Colorado Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming
Region IX	San Francisco, California Arizona, California, Hawaii, Nevada American Samoa, Guam, Trust Territories of Pacific Islands, Northern Mariana Islands
Region X	Headquarters, Seattle, Washington Alaska, Idaho, Oregon, Washington

ENVIRONMENTAL PROTECTION AGENCY

Summary of Budget Authority, Obligations, Outlays, and Workyears By Appropriation (dollars in thousands)

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Salaries and Expenses					
Budget Authority........	$ 815,000.4	$ 861,026.6	$ 863,998.1	$ 999,700.0	$ 135,701.9
Obligations.............	808,774.9	861,026.6	863,998.1	999,700.0	135,701.9
Outlays.................	834,444.0	833,445.0	836,000.0	969,794.0	133,794.0
Permanent Workyears.....	11,114.0	11,889.2	11,368.7	12,540.5	1,171.8
Total Workyears.........	11,457.6	11,890.2	11,751.2	12,540.5	789.3
Research and Development					
Budget Authority........	$ 202,500.0	$ 237,757.0	$ 229,949.9	$ 249,000.0	$ 19,050.1
Obligations.............	201,325.0	235,581.6	227,878.0	249,521.0	21,643.0
Outlays.................	182,467.0	222,729.0	219,653.0	240,592.0	20,939.0
Abatement, Control, and Compliance					
Budget Authority........	$ 719,625.3	$ 817,076.0	$ 796,914.6	$ 865,300.0	$ 68,385.4
Obligations.............	706,387.0	828,249.2	807,943.0	863,659.0	55,716.0
Outlays.................	623,190.0	783,670.0	775,802.0	832,359.0	56,557.0
Buildings and Facilities					
Budget Authority........	$ 8,000.0	$ 14,768.0	$ 14,652.0	$ 13,000.0	$ (1,652.0)
Obligations.............	6,592.7	24,543.6	24,723.0	13,000.0	(11,723.0)
Outlays.................	15,118.0	19,453.0	19,436.0	12,942.0	(6,494.0)
Office of Inspector General					
Budget Authority........	$ 0.0	$ 31,242.3	$ 30,903.3	$ 38,709.0	$ 7,805.7
Obligations.............	0.0	31,242.3	30,903.3	38,709.0	7,805.7
Outlays.................	0.0	18,745.0	18,542.0	30,951.0	12,409.0
Permanent Workyears.....	0.0	310.6	310.6	350.4	39.8
Total Workyears..........	0.0	310.6	310.6	350.4	39.8
Scientific Activities Overseas					
Obligations.............	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Outlays.................	49.0	250.0	250.0	250.0	0.0

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
SUBTOTAL, OPERATING PROGRAMS					
Budget Authority........	$1,745,125.7	$1,961,869.9	$1,936,417.9	$2,165,709.0	$ 229,291.1
Obligations.............	1,723,079.6	1,980,643.3	1,955,445.4	2,164,589.0	209,143.6
Outlays.................	1,655,258.0	1,878,292.0	1,869,683.0	2,086,888.0	217,205.0
Permanent Workyears.....	11,114.0	12,199.8	11,679.3	12,890.9	1,211.6
Total Workyears.........	11,457.6	12,200.8	12,061.8	12,890.9	829.1
Hazardous Substance Superfund					
Budget Authority........	$1,410,000.0	$1,550,588.1	$1,530,228.1	$1,740,000.0	$ 209,771.9
Obligations.............	1,543,715.5	1,598,039.3	1,578,322.0	1,740,000.0	161,678.0
Outlays.................	958,195.0	1,328,814.0	1,324,538.0	1,520,333.0	195,795.0
Permanent Workyears.....	2,424.0	2,967.2	3,345.7	3,467.2	121.5
Total Workyears.........	2,796.4	3,467.2	3,467.2	3,467.2	0.0
LUST Trust Fund					
Budget Authority........	$ 50,000.0	$ 74,822.1	$ 74,097.0	$ 75,000.0	$ 903.0
Obligations.............	50,875.4	78,279.6	77,555.0	75,000.2	(2,554.8)
Outlays.................	32,859.0	35,707.0	35,489.0	49,299.0	13,810.0
Permanent Workyears.....	81.0	91.3	85.7	90.4	4.7
Total Workyears.........	82.4	91.3	91.3	90.4	(0.9)
Construction Grants					
Budget Authority........	$1,950,000.0	$2,018,225.0	$1,991,720.0	$1,600,000.0	$ (391,720.0)
Obligations.............	2,531,237.0	2,305,233.0	2,305,233.0	1,697,930.0	(607,303.0)
Outlays.................	2,349,827.0	2,363,092.0	2,362,668.0	2,338,857.0	(23,811.0)
Operations, Research and Facilities					
Obligations.............	$ 0.0	$ 50.0	$ 50.0	$ 50.0	$ 0.0
Outlays.................	0.0	250.0	250.0	250.0	0.0
Tolerances Revolving Fund					
Obligations.............	$ 806.7	$ 1,000.0	$ 1,000.0	$ 1,000.0	$ 0.0
Outlays.................	(293.0)	(200.0)	(200.0)	(200.0)	0.0

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Misc. Contrib. Funds					
Obligations.............	$ 4.3	$ 10.0	$ 10.0	$ 10.0	$ 0.0
Outlays.................	2.0	10.0	10.0	10.0	0.0
Reregistration & Expedited Processing Revolving Fund					
Obligations.............	$ 5,303.6	$ 33,851.0	$ 33,851.0	$ 18,000.0	$ (15,851.0)
Outlays.................	(16,040.0)	(11,000.0)	(11,000.0)	7,100.0	18,100.0
Permanent Workyears.....	132.0	0.0	148.0	238.5	90.5
Total Workyears.........	33.6	0.0	148.0	238.5	90.5
Reimbursements - S&E					
Obligations.............	$ 15,751.7	$ 20,000.0	$ 19,947.0	$ 20,000.0	$ 53.0
Permanent Workyears.....	67.0	74.0	74.0	74.0	0.0
Total Workyears.........	66.6	74.0	74.0	74.0	0.0
Reimbursements-Superfund					
Obligations.............	$ 6,787.0	$ 30,000.0	$ 29,815.0	$ 30,000.0	$ 185.0
Reimbursements-R&D					
Obligations.............	$ 3,444.3	$ 5,000.0	$ 5,000.0	$ 5,000.0	$ 0.0
Reimbursements-AC&C					
Obligations.............	$ 0.0	$ 0.0	$ 0.0	$ 5,000.0	$ 5,000.0
TOTAL, EPA					
Budget Authority........	$5,155,125.7	$5,605,505.1	$5,532,463.0	$5,580,709.0	$ 48,246.0
Obligations.............	5,881,009.1	6,052,106.2	6,006,228.4	5,756,579.2	(249,649.2)
Outlays.................	4,979,818.0	5,594,965.0	5,581,438.0	6,002,537.0	421,099.0
Permanent Workyears.....	13,818.0	15,332.3	15,332.7	16,761.0	1,428.3
Total Workyears.........	14,436.6	15,833.3	15,842.3	16,761.0	918.7

Summary of Budget Authority, Obligations, Outlays, and Workyears By Media (dollars in thousands)

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Air					
Budget Authority........	$ 268,368.5	$ 294,000.9	$ 288,924.8	$ 389,791.0	$ 100,866.2
Obligations.............	267,314.6	291,008.6	288,796.0	388,384.0	99,588.0
Outlays.................	268,535.0	290,932.9	289,614.3	385,203.0	95,588.7
Permanent Workyears.....	1,598.9	1,756.9	1,704.3	1,984.6	280.3
Total Workyears.........	1,680.4	1,756.9	1,739.4	1,984.6	245.2
Water Quality					
Budget Authority........	$ 289,822.2	$ 350,292.2	$ 345,339.5	$ 379,096.5	$ 33,757.0
Obligations.............	285,340.7	355,063.1	350,177.0	378,871.0	28,694.0
Outlays.................	270,382.5	334,643.9	333,127.9	358,749.0	25,621.1
Permanent Workyears.....	2,010.7	2,283.0	2,125.0	2,311.8	186.8
Total Workyears.........	2,142.8	2,284.0	2,215.9	2,311.8	95.9
Drinking Water					
Budget Authority........	$ 108,264.3	$ 122,399.3	$ 120,796.3	$ 132,637.3	$ 11,841.0
Obligations.............	106,809.6	122,356.1	121,059.0	132,592.0	11,533.0
Outlays.................	111,414.4	124,177.3	123,615.1	133,914.3	10,299.2
Permanent Workyears.....	673.8	766.7	743.9	810.2	66.3
Total Workyears.........	716.0	766.7	768.0	810.2	42.2
Hazardous Waste					
Budget Authority........	$ 267,576.6	$ 273,787.5	$ 269,296.0	$ 317,144.1	$ 47,848.1
Obligations.............	262,638.4	277,264.3	273,315.0	316,795.0	43,480.0
Outlays.................	253,744.5	264,578.8	263,380.1	307,477.6	44,097.5
Permanent Workyears.....	1,372.2	1,523.0	1,432.9	1,634.7	201.8
Total Workyears.........	1,452.3	1,523.0	1,490.1	1,634.7	144.6
Pesticides					
Budget Authority........	$ 118,662.1	$ 106,932.2	$ 104,765.7	$ 110,072.7	$ 5,307.0
Obligations.............	117,961.3	106,341.2	104,303.0	110,118.0	5,815.0
Outlays.................	87,286.2	94,978.6	94,548.0	99,856.8	5,308.8
Permanent Workyears.....	795.7	853.3	957.3	1,091.7	134.4
Total Workyears.........	845.3	853.3	990.9	1,091.7	100.8

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Radiation					
Budget Authority........	$ 24,626.9	$ 35,862.8	$ 35,071.5	$ 39,109.7	$ 4,038.2
Obligations.............	24,744.1	35,528.6	34,849.0	38,602.0	3,753.0
Outlays.................	22,383.1	31,472.9	31,330.5	35,040.9	3,710.4
Permanent Workyears.....	184.1	220.2	214.2	240.8	26.6
Total Workyears.........	194.0	220.2	216.8	240.8	24.0
Noise					
Budget Authority........	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Obligations.............	0.0	0.0	0.0	0.0	0.0
Outlays.................	12.2	0.0	0.0	0.0	0.0
Multimedia					
Budget Authority........	$ 80,339.0	$ 123,625.4	$ 126,861.2	$ 166,419.4	$ 39,558.2
Obligations.............	79,864.2	122,883.2	122,626.0	166,069.0	43,443.0
Outlays.................	66,049.9	115,606.1	115,082.1	153,027.4	37,945.3
Permanent Workyears.....	597.7	773.0	721.1	841.5	120.4
Total Workyears.........	640.9	773.0	742.3	841.5	99.2
Toxic Substances					
Budget Authority........	$ 144,578.0	$ 158,368.6	$ 155,862.8	$ 113,439.0	$ (42,423.8)
Obligations.............	143,120.0	157,537.5	155,212.0	114,439.0	(40,773.0)
Outlays.................	143,200.2	140,097.6	139,462.9	104,527.4	(34,935.5)
Permanent Workyears.....	815.9	906.6	865.4	886.2	20.8
Total Workyears.........	862.0	906.6	876.1	886.2	10.1
Energy					
Budget Authority........	$ 54,735.7	$ 33,480.8	$ 32,171.9	$ 14,256.7	$ (17,915.2)
Obligations.............	54,478.9	33,555.0	32,822.0	14,730.0	(18,092.0)
Outlays.................	57,314.6	45,735.0	45,527.6	28,502.8	(17,024.8)
Permanent Workyears.....	62.8	52.4	51.8	30.4	(21.4)
Total Workyears.........	67.2	52.4	51.8	30.4	(21.4)
Management and Support					
Budget Authority........	$ 380,152.4	$ 423,427.7	$ 418,029.3	$ 477,061.2	$ 59,031.9
Obligations.............	374,215.1	429,639.5	422,916.6	477,307.2	54,390.6
Outlays.................	359,827.4	396,256.0	394,460.5	456,922.8	62,462.3
Permanent Workyears.....	2,700.3	2,996.9	2,943.6	3,209.2	265.6
Total Workyears.........	2,894.3	2,996.9	3,050.7	3,209.2	158.5

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Buildings and Facilities					
Budget Authority........	$ 8,000.0	$ 14,768.0	$ 14,652.0	$ 13,000.0	$ (1,652.0)
Obligations.............	6,592.7	24,543.6	24,723.0	13,000.0	(11,723.0)
Outlays.................	15,118.0	19,543.0	19,436.0	12,942.0	(6,494.0)
Hazardous Substance Superfund					
Budget Authority........	$1,410,000.0	$1,560,745.0	$1,540,286.0	$1,753,106.4	$ 212,820.4
Obligations.............	1,543,719.5	1,608,194.3	1,588,379.8	1,753,107.0	164,727.2
Outlays.................	958,195.0	1,334,907.0	1,330,631.0	1,530,711.0	200,080.0
Permanent Workyears.....	2,621.5	3,035.0	3,413.5	3,552.0	138.5
Total Workyears.........	2,799.4	3,535.0	3,535.0	3,552.0	17.0
LUST Trust Fund					
Budget Authority........	$ 50,000.0	$ 74,822.0	$ 74,097.0	$ 75,575.0	$ 1,478.0
Obligations.............	50,875.4	78,279.6	77,555.0	75,575.0	(1,980.0)
Outlays.................	32,859.0	35,707.0	35,489.0	49,645.0	14,156.0
Permanent Workyears.....	77.7	91.3	85.7	93.9	8.2
Total Workyears.........	82.4	91.3	91.3	93.9	2.6
Construction Grants					
Budget Authority........	$1,950,000.0	$2,018,225.0	$1,991,720.0	$1,600,000.0	$ (391,720.0)
Obligations.............	2,531,237.0	2,305,233.0	2,305,233.0	1,697,930.0	(607,303.0)
Outlays.................	2,349,827.0	2,363,092.0	2,362,668.0	2,338,857.0	(23,811.0)
Operations, Research and Facilities					
Obligations.............	$ 0.0	$ 50.0	$ 50.0	$ 50.0	$ 0.0
Outlays.................	0.0	250.0	250.0	250.0	0.0
Tolerances Revolving Fund					
Obligations.............	$ 806.7	$ 1,000.0	$ 1,000.0	$ 1,000.0	$ 0.0
Outlays.................	(293.0)	(200.0)	(200.0)	(200.0)	0.0
Misc. Contrib. Funds					
Obligations.............	$ 4.3	$ 10.0	$ 10.0	$ 10.0	$ 0.0
Outlays.................	2.0	10.0	10.0	10.0	0.0

	Actual 1989	Enacted 1990	Current Estimate 1990	Request 1991	Increase/ Decrease 1991 Req. vs. Current 1990
Reregistration & Expedited Processing Revolving Fund					
Obligations.............	$ 5,303.6	$ 33,851.0	$ 33,851.0	$ 18,000.0	$ (15,851.0)
Outlays.................	(16,040.0)	(11,000.0)	(11,000.0)	7,100.0	18,100.0
Reimbursements - S&E					
Obligations.............	$ 15,751.7	$ 20,000.0	$ 19,947.0	$ 20,000.0	$ 53.0
Permanent Workyears.....	64.9	74.0 **	74.0 **	74.0	0.0
Total Workyears.........	66.6	74.0 **	74.0 **	74.0	0.0
Reimbursements-Superfund					
Obligations.............	$ 6,787.0	$ 30,000.0	$ 29,815.0	$ 30,000.0	$ 185.0
Reimbursements-R&D					
Obligations.............	$ 3,444.3	$ 5,000.0	$ 5,000.0	$ 5,000.0	$ 0.0
Reimbursements-AC&C					
Obligations.............	$ 0.0	$ 0.0	$ 0.0	$ 5,000.0	$ 5,000.0
TOTAL, EPA					
Budget Authority........	$5,155,125.7	$5,605,505.0 *	$5,532,483.0 *	$5,580,709.0	48,246.0
Obligations.............	5,881,009.1	6,052,106.2 *	6,006,228.4 *	5,756,579.2	(249,649.2)
Outlays.................	4,979,818.0	5,504,965.0 *	5,581,438.0 *	6,002,537.0	421,099.0
Permanent Workyears.....	13,576.2	15,332.3	15,332.7	16,761.0	1,428.3
Total Workyears.........	14,443.6	15,833.3	15,842.3	16,761.0	918.7

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* Enacted 1990 BA and Obligation totals include $14,767.6 in undistributed funds.
1990 Current Estimate BA and Obligation totals include $14,589.0 in undistributed funds.
Enacted 1990 Outlays include $14,176.9/1990 Current Estimate outlays include $14,005.0 in undistrubuted funds.

** Includes 12 FTE for Ocean Dumping (10 in Water Quality and 2 in Multimedia).

ENVIRONMENTAL PROTECTION AGENCY

Object Classification
Direct Obligations
(dollars in thousands)

	Actual 1989	Current Estimate 1990	Request 1991	Increase/ decrease 1991 Req. vs Current 1990
Salaries and Expenses				
Personnel Services.............	$ 535,957.0	$ 556,234.0	$ 580,051.0	$ 23,817.0
Other objects:				
21.0 Travel and transportation of persons.....	21,366.0	25,747.0	32,475.0	6,728.0
22.0 Transportation of things.	2,139.0	2,378.0	3,603.0	1,225.0
23.1 Rental payments to GSA...	47,540.0	52,849.0	80,087.0	27,238.0
23.2 Rental payments to others	14,767.0	16,416.0	24,877.0	8,461.0
23.3 Communications,utilities, and misc. charges........	28,697.0	31,902.0	48,344.0	16,442.0
24.0 Printing and reproduction	6,217.0	6,911.0	10,473.0	3,562.0
25.0 Other services...........	92,250.0	109,728.0	123,815.0	14,087.0
26.0 Supplies and materials...	15,480.0	17,209.0	26,078.0	8,869.0
31.0 Equipment................	39,831.0	44,279.0	67,100.0	22,821.0
32.0 Land and structures......	57.0	63.0	96.0	33.0
41.0 Grants, subsidies, and contributions............	4,442.0	246.0	2,647.0	2,401.0
42.0 Insurance, claims, and indemnities..............	32.0	36.0	54.0	18.0
subtotal, other objects...	272,818.0	307,764.0	419,649.0	111,885.0
Total obligations.........	808,775.0	863,998.0	999,700.0	135,702.0

Object Classification
Direct Obligations
(dollars in thousands)

	Actual 1989	Current Estimate 1990	Request 1991	Increase/ decrease 1991 Req. vs Current 1990
Office of the Inspector General				
Personnel Services............	0.0	13,921.0	14,920.0	999.0
Other objects:				
21.0 Travel and transportation of persons.....	0.0	1,806.0	2,484.0	678.0
23.1 Rental payments to GSA...	0.0	2,197.0	4,244.0	2,047.0
23.3 Communications, utilities, and misc. charges........	0.0	1,970.0	3,805.0	1,835.0
25.0 Other services...........	0.0	11,009.0	13,256.0	2,247.0
subtotal, other objects...	0.0	16,982.0	23,789.0	6,807.0
Total obligations (OIG)....	0.0	30,903.0	38,709.0	7,806.0
Research and Development				
24.0 Printing and reproduction	$ 194.0	$ 0.0	$ 0.0	$ 0.0
25.0 Other services...........	130,494.0	136,273.0	150,339.0	14,066.0
31.0 Equipment................	3,589.0	11,600.0	11,600.0	0.0
41.0 Grants, subsidies, and contributions............	67,048.0	80,005.0	87,582.0	7,577.0
Total obligations.........	201,325.0	227,878.0	249,521.0	21,643.0

Object Classification
Direct Obligations
(dollars in thousands)

	Actual 1989	Current Estimate 1990	Request 1991	Increase/ decrease 1991 Req. vs Current 1990
Abatement, Control, and Compliance				
21.0 Travel and transportation of persons.....	$ 295.0	$ 641.0	$ 750.0	$ 109.0
22.0 Transportation of things.	3.0		21.0	21.0
23.3 Communications, utilities, and misc. charges........	29.0	2.0	206.0	204.0
24.0 Printing and reproduction	240.0	19.0	1,701.0	1,682.0
25.0 Other services...........	317,038.0	411,803.0	404,268.0	(7,535.0)
26.0 Supplies and materials...	64.0	5.0	454.0	449.0
31.0 Equipment................	1,555.0	121.0	11,021.0	10,900.0
41.0 Grants, subsidies, and contributions............	387,163.0	395,352.0	445,238.0	49,886.0
Total obligations.........	706,387.0	807,943.0	863,659.0	55,716.0
Buildings and Facilities				
21.0 Travel and transportation of persons.....	$ 91.0	$ 213.0	$ 235.0	$ 22.0
25.0 Other services...........	4,971.0	18,873.0	12,765.0	(6,108.0)
26.0 Supplies and materials...	6.0			0.0
32.0 Land and structures......	1,524.0	5,637.0		(5,637.0)
Total obligations (B&F)....	6,592.0	24,723.0	13,000.0	(11,723.0)

Object Classification
Direct Obligations
(dollars in thousands)

	Actual 1989	Current Estimate 1990	Request 1991	Increase/ decrease 1991 Req. vs Current 1990
Hazardous Substance Superfund				
Personnel Services............	$ 123,598.0	$ 138,546.0	$ 143,100.0	$ 4,554.0
Other objects:				
21.0 Travel and transportation of persons.....	9,916.0	11,808.0	11,757.0	(51.0)
22.0 Transportation of things.	596.0	739.0	1,358.0	619.0
23.1 Rental payments to GSA...	11,510.0	14,264.0	26,218.0	11,954.0
23.2 Rental payments to others	2,458.0	3,046.0	5,599.0	2,553.0
23.3 Communications,utilities, and misc. charges........	6,922.0	8,578.0	15,767.0	7,189.0
24.0 Printing and reproduction	1,019.0	1,263.0	2,321.0	1,058.0
25.0 Other services...........	1,045,364.0	1,020,238.0	1,131,167.0	110,929.0
26.0 Supplies and materials...	3,781.0	4,686.0	8,612.0	3,926.0
31.0 Equipment................	18,714.0	23,192.0	42,627.0	19,435.0
32.0 Land and structures......	5.0	6.0	11.0	5.0
41.0 Grants, subsidies, and contributions............	269,056.0	300,536.0	300,536.0	0.0
42.0 Insurance, claims, and indemnities..............	2.0	2.0	5.0	3.0
subtotal, other objects...	1,369,343.0	1,388,358.0	1,545,978.0	157,620.0
Subtotal direct obligations..	1,492,941.0	1,526,904.0	1,689,078.0	162,174.0
ALLOCATION ACCOUNTS				
Personnel Services............	12,448.0	12,605.0	12,483.0	(122.0)
Other objects:				
21.0 Travel and transportation of persons.....	1,743.0	1,765.0	1,748.0	(17.0)
22.0 Transportation of things.	93.0	94.0	93.0	(1.0)
23.1 Rental payments to GSA...	57.0	58.0	57.0	(1.0)
23.3 Communications,utilities, and misc. charges........	350.0	354.0	351.0	(3.0)
24.0 Printing and reproduction	708.0	717.0	710.0	(7.0)
25.0 Other services...........	30,066.0	30,444.0	30,151.0	(293.0)
26.0 Supplies and materials...	310.0	314.0	311.0	(3.0)
31.0 Equipment................	2,632.0	2,665.0	2,639.0	(26.0)
41.0 Grants, subsidies, and contributions............	2,372.0	2,402.0	2,379.0	(23.0)
subtotal, allocation accts.	50,779.0	51,418.0	50,922.0	(496.0)
Reimbursable obligations.......	24,327.0	29,815.0	30,000.0	185.0
Total obligations............	1,568.047.0	1,608,137.0	1,770,000.0	161,863.0

Object Classification
Direct Obligations
(dollars in thousands)

	Actual 1989	Current Estimate 1990	Request 1991	Increase/ decrease 1991 Req. vs Current 1990
LUST Trust Fund				
Personnel Services............	$ 3,686.0	$ 2,204.0	$ 2,300.0	$ 96.0
Other objects:				
21.0 Travel and transportation of persons.....	256.0	459.0	955.0	496.0
22.0 Transportation of things.	14.0	17.0	27.0	10.0
23.1 Rental payments to GSA...	502.0	626.0	969.0	343.0
23.2 Rental payments to others	75.0	94.0	145.0	51.0
23.3 Communications,utilities, and misc. charges........	85.0	106.0	164.0	58.0
24.0 Printing and reproduction	53.0	66.0	102.0	36.0
25.0 Other services...........	3,524.0	3,782.0	3,972.0	190.0
26.0 Supplies and materials...	47.0	59.0	91.0	32.0
31.0 Equipment................	317.0	395.0	612.0	217.0
41.0 Grants, subsidies, and contributions............	42,316.0	69,747.0	65,663.0	(4,084.0)
subtotal, other objects...	47,189.0	75,351.0	72,700.0	(2,651.0)
Total obligations (LUST)...	50,875.0	77,555.0	75,000.0	(2,555.0)

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade
SALARIES AND EXPENSES

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
Executive Level II	1	1	1
Executive Level III	1	1	1
Executive Level IV	7	8	9
Subtotal	9	10	11
ES-6	7	8	9
ES-5	36	38	43
ES-4	87	90	99
ES-3	65	67	74
ES-2	15	16	18
ES-1	15	16	18
Subtotal	225	235	261
GS-17	1	1	1
GS-16	10	10	11
GS/GM-15	699	716	790
GS/GM-14	1,409	1,439	1,582
GS/GM-13	2,101	2,144	2,360
GS-12	2,079	2,121	2,335
GS-11	1,080	1,100	1,208
GS-10	66	68	75
GS-9	767	786	867
GS-8	206	212	235
GS-7	859	880	971
GS-6	514	527	581
GS-5	552	566	625
GS-4	236	242	267
GS-3	42	43	48
GS-2	11	11	13
Subtotal	10,632	10,866	11,969
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Director Grade 06, $33,880 to $58,525	47	49	54
Senior Grade 05, $27,094 to $47,750	93	96	107
Full Grade 04, $22,842 to $39,931	38	40	45
Assistant grade 03, $21,226 to $34,535	6	7	9
Subtotal	184	192	215
Positions established by act of November 16, 1977 (42 U.S.C. 201) compensation for which is not to exceed the maximum payable for a GS-18	14	15	17
Ungraded	50	51	56
TOTAL PERMANENT POSITIONS	11,114	11,369	12,529

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade

OFFICE OF THE INSPECTOR GENERAL

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
Executive Level V	...	1	1
ES-5	...	1	1
ES-4	...	3	3
ES-3	...	2	2
Subtotal	...	6	6
GS/GM-15	...	20	23
GS/GM-14	...	40	45
GS/GM-13	...	80	91
GS-12	...	61	69
GS-11	...	20	23
GS-10	...	2	2
GS-9	...	19	21
GS-8	...	3	3
GS-7	...	35	39
GS-6	...	8	9
GS-5	...	7	8
GS-4	...	7	8
GS-3	...	1	1
GS-2	...	1	1
Subtotal	...	304	343
TOTAL PERMANENT POSITIONS	...	311	350

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade

HAZARDOUS SUBSTANCE SUPERFUND

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
ES-5	1	2	2
ES-4	8	11	11
ES-3	8	11	11
ES-2	4	6	6
ES-1	1	2	2
Subtotal	22	32	32
GS/GM-15	85	117	121
GS/GM-14	200	276	286
GS/GM-13	549	758	786
GS-12	641	881	913
GS-11	281	388	403
GS-10	1	2	2
GS-9	129	178	184
GS-8	12	17	18
GS-7	143	197	205
GS-6	84	116	120
GS-5	153	211	219
GS-4	97	134	139
GS-3	8	11	11
GS-2	1	2	2
Subtotal	2,384	3,288	3,409
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Director Grade 06, $33,880 to $58,525	7	10	10
Senior Grade 05, $27,094 to $47,750	5	7	7
Full Grade 04, $22,842 to $39,931	4	6	6
Assistant grade 03, $21,226 to $34,535	2	3	3
Subtotal	18	26	26
TOTAL PERMANENT POSITIONS	2,424	3,346	3,467

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade

LEAKING UNDERGROUND STORAGE TANK (LUST)

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
GS/GM-15	3	3	3
GS/GM-14	4	4	4
GS/GM-13	18	19	20
GS-12	24	27	29
GS-11	16	17	18
GS-9	7	7	7
GS-8	1	1	1
GS-7	2	2	2
GS-6	1	1	1
GS-5	3	3	3
GS-4	2	2	2
TOTAL PERMANENT POSITIONS . .	81	86	90

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT
(FIFRA REVOVLING FUND)

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
GS/GM-15	4	4	6
GS/GM-14	14	16	26
GS/GM-13	18	20	32
GS-12	17	19	31
GS-11	20	22	36
GS-9	28	33	52
GS-8	2	2	3
GS-7	17	19	31
GS-6	3	3	5
GS-5	5	6	10
GS-4	3	3	5
GS-3	1	1	2
TOTAL PERMANENT POSITIONS	132	148	239

ENVIRONMENTAL PROTECTION AGENCY
Permanent Positions by Grade

REIMBURSABLES
(SALARIES AND EXPENSES)

Grades	Actual 1989	Current Estimate 1990	Estimate 1991
GS/GM-15	4	4	4
GS/GM-14	3	3	3
GS/GM-13	9	10	10
GS-12	8	9	9
GS-11	9	10	10
GS-10	3	3	3
GS-9	8	9	9
GS-8	2	2	2
GS-7	8	10	10
GS-6	1	1	1
GS-5	6	7	7
Subtotal	61	68	68
Positions established by act of July 1, 1974 (42 U.S.C. 207)			
Director grade 06, $33,880 to $58,525	4	4	4
Senior grade 05, $27,094 to $47,750	1	1	1
Full grade 04, $22,842 to $39,931	1	1	1
Subtotal	6	6	6
TOTAL PERMANENT POSITIONS . .	67	74	74

ENVIRONMENTAL PROTECTION AGENCY

Average Grade and Salary

Appropriation/Pay Plan	Actual 1989	Current Estimate 1990	Estimate 1991
Salaries and Expenses			
Average ES Salary	$75,632	$78,355	$81,176
Average GS/GM Grade	10.9	10.9	10.9
Average GS/GM Salary . . .	$38,869	$40,268	$41,718
Average Salary of Ungraded Positions	$14,002	$14,506	$15,028
Office of the Inspector General			
Average ES Salary	...	$76,519	$79,274
Average GS/GM Grade	...	11.2	11.3
Average GS/GM Salary . . .	...	$39,682	$41,111
Superfund			
Average ES Salary	$74,768	$77,460	$80,248
Average GS/GM Grade	10.8	10.8	10.8
Average GS/GM Salary . . .	$36,545	$37,861	$39,224
Leaking Underground Storage Tank			
Average GS/GM Grade	11.2	11.3	11.3
Average GS/GM Salary . . .	$37,740	$39,098	$40,505
FIFRA Revloving Fund			
Average GS/GM Grade	10.3	10.2	10.2
Average GS/GM Salary . . .	$32,716	$33,894	$35,114
Reimbursables			
Average GS/GM Grade	10.2	10.1	10.1
Average GS/GM Salary . . .	$35,129	$36,394	$37,704
TOTAL AGENCY AVERAGE			
Average ES Salary	$75,200	$77,445	$80,233
Average GS/GM Grade	10.6	10.7	10.7
Average GS/GM Salary . . .	$36,200	$37,866	$39,229
Average Salary of Ungraded Positions	$14,002	$14,506	$15,028

ENVIRONMENTAL PROTECTION AGENCY
Summary of State Grant Resources
(in thousands of dollars)

	ACTUAL 1989	CURRENT ESTIMATE 1990	REQUEST 1991	INCREASE + DECREASE - 1991 VS 1990
AIR				
Section 105	$101,478.5	$99,181.4	$137,700.0	$38,518.6
WATER QUALITY	76,496.9	119,494.9	117,450.0	(2,044.9)
Section 106	67,472.5	72,599.1	81,700.0	9,100.9
Clean Lakes	9,024.4	8,747.7	0.0	(8,747.7)
Nonpoint Source	0.0	36,933.1	14,250.0	(22,683.1)
Wetlands Program Implementation	0.0	1,215.0	5,000.0	3,785.0
Water Quality Management	0.0	0.0	16,500.0	16,500.0
DRINKING WATER	46,163.1	54,863.4	58,950.0	4,086.6
Public Water Systems Program Grants	33,042.8	39,311.5	47,450.0	8,138.5
Underground Injection Control Program	10,120.3	11,177.8	10,500.0	(677.8)
Special Studies	3,000.0	4,374.1	1,000.0	(3,374.1)
HAZARDOUS WASTE	75,931.7	76,779.1	97,000.0	20,220.9
H.W. Financial Assistance	66,753.0	68,031.7	88,000.0	19,968.3
Underground Storage Tanks	9,178.7	8,747.4	9,000.0	252.6
PESTICIDES	12,906.1	24,593.0	30,303.4	5,710.4
Pesticides Enforcement Grants	8,928.0	12,444.0	15,803.4	3,359.4
Pesticides Program Implementation	3,978.1	12,149.0	14,500.0	2,351.0
RADIATION				
Radon State Grants	0.0	8,972.1	9,000.0	27.9
TOXIC SUBSTANCES				
Toxic Substances Enforcement Grants	2,102.1	3,110.3	5,100.0	1,989.7
SUBTOTAL	$315,078.4	$386,994.2	$455,503.4	$68,509.2
CONSTRUCTION GRANTS	2,531,237.3	1,991,720.0	1,600,000.0	(391,720.0)
TOTAL	$2,846,315.7	$2,378,714.2	$2,055,503.4	($323,210.8)

THURSDAY, APRIL 26, 1990.

COUNCIL ON ENVIRONMENTAL QUALITY

WITNESSES

MICHAEL R. DELAND, CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY

DAVID B. STRUHS, STAFF DIRECTOR, COUNCIL ON ENVIRONMENTAL QUALITY

DINAH BEAR, GENERAL COUNSEL, COUNCIL ON ENVIRONMENTAL QUALITY

DONNA C. CONNELL, PROGRAM ANALYST, COUNCIL ON ENVIRONMENTAL QUALITY

MARY G. HOLLAND, SENIOR POLICY ANALYST, COUNCIL ON ENVIRONMENTAL QUALITY

Mrs. BOGGS. I would like to extend a very warm welcome to Michael Deland, the new Chairman of the Council on Environmental Quality.

It is nice to see that a new group is in place at CEQ.

Please introduce your associates.

Mr. DELAND. On my left is Donna Connell, a Program Analyst working on budgetary matters; and David Struhs, the Staff Director.

On my immediate left is Dinah Bear, our General Counsel; and on the right is Mary Holland, a Senior Policy Analyst who has been working on various matters ranging from recycling and perhaps of more immediate concern to your committee the educational initiative proposed.

CEQ BUDGET REQUEST

Mrs. BOGGS. The Council on Environmental Quality is requesting $2,780,000 for fiscal year 1991.

This is $1,991,000 above the fiscal year 1990 request of $861,000 and $1,315,000 above the 1990 level of $1,465,000.

In addition, CEQ is requesting 34 FTEs, 14 above the current level.

We welcome your statement, Mr. Deland, at this point.

CEQ FUNCTIONS

Mr. DELAND. Thank you, Mrs. Boggs.

As you know, I have prepared written testimony and I won't consume your time to read that, but will briefly summarize what I view to be some of the highlights.

The reason for the increased request is that in CEQ's 20th anniversary year, the President happily is committed to its revitalization.

As you know as well as anyone, the Council was allowed to wither on the vine over the course of the eight years of the last Administration and now the President is committed to rebuilding it.

That rebuilding started in this fiscal year and with our proposed request will, we hope, continue in the coming year.

The budget request is predicated on our anticipation and the President's of being able to fulfill what were the traditional roles of the Council, first and foremost, to serve as the in-house environmental advisor to the President, a role that we have resumed during the course of the last year.

I participate, for example, in the deliberations of the Domestic Policy Council, the Economic Policy Council, and in Cabinet meetings, and have had wide access to the President to advise him on particular environmental issues.

Along with that function, there have been numbers of ancillary ones such as co-chairing this last week the White House Conference on Global Climate Change.

I also serve on the Domestic Policy Council Task Forces on Wetlands and one on Global Climate Change.

A second role and one that we again are establishing is that of "honest broker", arbitrator, facilitator, however you wish to characterize it, amongst the various Federal Departments as they inevitably differ.

The expectation is that CEQ should be the forum through which disputes, whether they be between EPA or the Department of Interior or between Energy and Commerce, whatever the mix might be, is the forum by which they are arbitrated so that the President does not have to become personally involved in the resolution.

We further help to set overall environmental policy for the Administration, working particularly closely with the Environmental Protection Agency, the Department of Energy, Transportation and across the various agencies in that aspect.

A third function, one which was preserved over the course of the last eight years, but which was was not done in a timely fashion was the preparation of the annual report.

We now have that back on schedule or close to the schedule that we would like to see.

It is in its final review stages right now and should be published within the next three weeks.

As you again know, a fourth function has been that of the guardian, if you will, of the Environmental Impact Statement process under the National Environmental Policy Act.

That was a role that was indeed maintained over the course of the last eight years, but one in which we are building upon as we look to the future.

Those are the major functions, as I see them, of the Council.

NEW INITIATIVES

There are several new initiatives.

One is the President's Initiative for Environmental Excellence Awards through which the Council would award up to $5,000 for two teachers per State who have excelled in the environmental education area.

The thinking there is that if we are indeed to, over the long haul, solve our environmental problems, we might as well start at the grade school/high school levels. The segment of society that really needs to be recognized in this regard is the teachers who are, in fact, instrumental in that.

Finally, I would mention or should mention the restructuring of the Council which was proposed formally last week in a markup of the Senate Environment and Public Works Committee which would bring into statutory reality what has been the operating mode of the last year, and that is namely to operate with a one-person Council as opposed to the three-person Council of old.

The rationale for that includes one of dollars, that two additional high-level positions would consume a substantial amount of money and the feeling was if we could for those same moneys get some more folks in the working trenches that that made sense.

And as importantly, if the Chairman of the Council is indeed to reassume, as I believe I have, the role of in-house environmental advisor then it did not make sense for me to come to agreement with the President on an issue and have to go back to the Council and put that agreement to a formal vote.

So for those, and numbers of other reasons, the decision was made not to fill those other two slots and we obviously do have to amend NEPA to comport with that thinking.

Finally, by way of overview, my prime priority as we do build back up and hopefully become more influential within the Administration on environmental matters is to focus on pollution prevention.

I feel very strongly that the wave of the environmental future is preventing pollution at the source rather than continuing to look almost solely to cleaning it up at the end of the pipe or at the stack.

We have already begun working with various components within the Administration, with the Department of Energy and others towards that end.

I would view that to be a main focal point, main thrust of a rejuvenated Council in the coming year.

With that, I would be delighted to respond to any comments or queries you might have.

Mrs. Boggs. Thank you very much.

[The statement of Mr. DeLand follows:]

TESTIMONY OF MICHAEL R. DELAND
CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY
BEFORE THE
SUBCOMMITTEE ON VA, HUD, AND INDEPENDENT AGENCIES
COMMITTEE ON APPROPRIATIONS

APRIL 26, 1990

Mr. Chairman, members of the Subcommittee, I appreciate the opportunity to appear before you regarding the Council on Environmental Quality's (CEQ) budget for FY 1991.

The Council on Environmental Quality is celebrating is 20th anniversary, having been created with the signing of the National Environmental Policy Act (NEPA). NEPA set out several missions of critical importance for the Council in 1970. At this 20-year milestone, the Bush Administration has recommitted itself to the principles and goals of that seminal environmental law, and with that, to the revitalization of CEQ.

President Bush has expressed his personal commitment to me in strengthening CEQ to ensure that it has the capacity both in terms of resources and access to serve as an effective source of environmental analysis and information in the White House. I am pleased to say, that as part of that commitment, the President's Budget continues the strengthening of CEQ that began in FY 1990. The Administration is asking for a 90 percent increase in CEQ's budget for 1991.

This increase will allow CEQ to regain the capacity to serve as an adviser to the President on environmental issues, to ensure that Federal policies and activities are consistent with the National Environmental Policy Act, to provide coordination among agencies on key issues such as wetlands and global climate change, and to report to the Nation on the state of the environment and related indicators.

The Council on Environmental Quality, which includes the Office of Environmental Quality, is requesting budget authority of $2,780,000 for fiscal year 1991 and a personnel ceiling of 34 FTEs. This amount will increase our capability to meet the important responsibilities given to the Council under the National Environmental Policy Act and expected from us by the President and by the Congress.

CEQ provides a means for incorporating an environmental perspective in the Executive Office. CEQ also serves as a source of environmental expertise for other organizations within the Executive Office of the President and provides for coordination and policy analysis of environmental programs of the federal government. Let me mention briefly the range of CEQ activities.

CEQ advises the President on national and international policies to foster and promote the improvement of environmental quality. As CEQ Chairman, I participate in meetings of the Domestic Policy Council, the Economic Policy Council, and select meetings of the National Security Council. I was a Co-Chairman of last week's White House Conference on Science and Economic Research Related to Global Change, and I am a member of the Domestic Policy Council's Working Group on Global Climate Change and on the Domestic Policy Council's wetlands task force. As requested by the President, CEQ analyzes and makes recommendations on policy and legislation.

CEQ is in a unique position, because of its trans-agency perspective, to provide general leadership and support to the coordination of activities of the federal departments and agencies which affect, protect and improve environmental quality.

CEQ prepares the President's annual Environmental Quality Report to Congress. In response to complaints regarding its timely publication, I have pledged that CEQ will ensure the expedited preparation of the report.

CEQ oversees federal agency implementation of the environmental impact assessment process. CEQ promulgates the regulations which implement the overall federal requirements for all agencies in the executive branch. CEQ is the final administrative authority interpreting the federal environmental impact assessment requirement and referees interagency disputes on the conduct of these assessments. CEQ has encouraged recognition of environmental impacts of major federal actions conducted abroad, and is currently chairing an interagency task force to focus on this issue.

CEQ serves as a bridge between the Administration and the private sector in promoting the attainment of environmental quality. CEQ fosters cooperation between the federal and local government, the private sector and the environmental community.

I am very pleased that the President has designated CEQ as the agency to administer a new environmental initiative for FY 1991, the President's Awards for Excellence in Environmental Education. This program will recognize elementary and secondary school teachers who incorporate the most innovative and effective programs to teach students about the environment into their curricula. The award will include a cash award of up to $5,000.

In 1991 CEQ will continue to provide leadership in areas of critical environmental concern including global climate change, preservation of wetlands, pollution prevention and energy efficiency, the analysis of environmental quality indicators and trends, international development issues, and biological diversity.

My charge is to instill respect, credibility and spark into CEQ; to take the best of the old CEQ while at the same time reshaping it to better meet the needs of the White House and to better meet the demands of emerging environmental priorities. In rebuilding the Council we must focus on how it can best meet its important statutory mandate. I believe we are making very real progress. The President's Budget is an important step towards accomplishing that goal.

I would look forward to discussing this with you further and answering any questions you may have.

Thank you.

CEQ ROLE IN ADMINISTRATION

Mrs. **Boggs**. This is your first year as Chairman of the Council on Environmental Quality. Based on your budget justification CEQ is going to take a more active role under this Administration.

It looks as though the EPA will be raised to Cabinet level and become a Department.

How will this affect the Council's role? Won't the Secretary of this new Department be the President's top advisor on environmental issues?

Mr. **DeLand**. I really don't think it will affect CEQ's role in that we have worked very cooperatively with EPA and with Administrator Reilly, and I would look forward to working with him as Secretary Reilly just as I do with the Secretaries of the other Departments.

So I don't see it in any way undercutting CEQ nor do I see it being in a competitive situation with EPA.

An analogy that one might look to is that of the National Security Council, which plays a vital role in my judgment within the Administration at the same time as you obviously have a Department of Defense.

Mrs. **Boggs**. According to page 23 of the justification, you represent the Executive Branch at official national and international meetings concerned with environmental affairs.

Does Mr. Reilly participate in these meetings as well?

Mr. **DeLand**. It depends.

We participate jointly in some and then individually in others. Again, we have had a very cooperative relationship in discussing before committing to a meeting whether it is one that we should attend jointly or one that I should represent the Government or one that he should.

Mrs. **Boggs**. Do you coordinate your policy recommendations with EPA for representation at these meetings?

Mr. **DeLand**. Yes.

Mrs. **Boggs**. Mr. Chairman?

TECHNICAL STAFF AT CEQ

Mr. **Traxler**. You are doing just fine, Mrs. Boggs, stay right there.

I want to welcome the agency. I am sorry I wasn't with you at the start.

We are concerned about the lack of technical and scientific staff at CEQ. In our judgment, you can't be used extensively for technical advice and analysis if you do not have a staff that is capable of handling that level of responsibility.

At last year's hearings, Mr. Hill indicated that CEQ was down to one scientist, but as the outgoing Chairman, he was reluctant to recruit scientists because he couldn't give them any guarantees.

In the past year, the staff has doubled from 10 to 20.

How many scientists and technical staff do you now have?

Mr. **DeLand**. We have some experts in the various areas, natural resources being one, but we have not yet added Ph.D. scientific capability and that would clearly be a prime priority of this coming year if our budget request is approved.

We have built, Mr. Chairman, the staff in various ways, augmenting the legal capabilities.

We have also added an economist, feeling it essential that that be a discipline represented within our immediate staff.

Mr. TRAXLER. Did you say that you have one technical person, one scientist?

Mr. DELAND. We do not have a Ph.D. scientist; no, sir.

Mr. TRAXLER. Do you have any scientists?

Mr. DELAND. We do not have Ph.D. scientists. We have people who are trained in the sciences at the master's level. That is an area that we expect to make a prime priority in the coming year.

Mr. TRAXLER. We are not making good progress in that area then.

Mr. DELAND. The reason for it, Mr. Chairman, is that we have been working very closely and cooperatively with the President's Science Advisor, Alan Bromley, and his staff and I felt given that level of cooperation, that it made sense to build first in other areas to reinforce those in which CEQ was the sole entity with responsibility.

We have done that and now the challenge is to build in the scientific area. But I envision never having a large staff, but one that gives us the in-house expertise to deal with the President's Science Advisor and his staff and other scientific entities within the Government.

Mr. TRAXLER. To assist the committee, provide for the record the names, education background, and the duty assignments of individuals who were added to the staff during the past year when you went from 10 to 20.

[The information follows:]

QUESTION: Please provide for the record the names, education background, and duty assignments of new staff since Michael Deland was confirmed as Chairman of the Council on Environmental Quality.

ANSWER:

o Carl Bausch joined CEQ as an Assistant General Counsel in September 1989. He received his B.A. degree in 1972 and his J.D. degree in 1975, both from Mercer University. Mr. Bausch's responsibilities at the Council include providing advice and assistance regarding the implementation by federal agencies of the National Environmental Policy Act, reviewing existing or proposed agency NEPA practices and procedures; and assisting in the coordination of federal programs and activities that affect environmental quality.

o Kimberly Chastain joined CEQ in a secretarial capacity in January 1990. Kim was graduated from Arizona State University in 1989 where she studied political science.

o Donna Connell joined the staff in May 1990 as a Program Analyst/Administrative Officer. Ms. Connell holds a B.S. in Education from Towson State University (1979). Her areas of responsibility include procurement, budget, and other agency administrative functions.

o Dale E. Curtis joined CEQ in February 1990 as Special Assistant to Chairman Deland. He holds an A.B. cum laude in government from Harvard University and is a candidate for the M.A. in American public policy history from George Washington University. He is responsible for legislative affairs, speechwriting, special projects, and general policy development.

o Jonathan Elkind is a Policy Analyst. He joined CEQ in December 1989. Mr. Elkind received a B.A. with Distinction in Russian history from the University of Michigan in 1983, and a M.A. in Soviet history from Columbia University in 1986. He also was a President's Fellow. His responsibilities at CEQ include: international programs, including White House Conference on Science and Economics Research Related to Global Change and associated follow-up; activities under CEQ's portion of the US-USSR Environmental Agreement (such as the upcoming Bering Sea Conference); Eastern European contacts generally; work on CEQ Annual Report; and other international projects as assigned.

o Robert Scott Farrow was appointed as a Senior Policy Analyst for CEQ in April 1990. Dr. Farrow received his Ph.D. in Economics from Washington State University in 1983. He received his B.A. from Whitman College in 1974, and his Masters degree at Washington State University in 1980. Prior to joining CEQ, he was an Associate Professor of

Economics at Carnegie Mellon University and a Marine Policy Fellow at the Woods Hole Oceanographic Institution. He has published professional articles on outer continental shelf oil leasing and resource extraction.

- Mary Grace Holland is a Senior Policy Analyst. She joined CEQ in October 1989. Ms. Holland received her B.A. degree in 1978 from Ohio State University, and her Masters degree from the School of Public Policy and Management at the Ohio State University in 1980. She entered federal service in 1980 as a Presidential Management Intern. Her areas of responsibility include pollution prevention, recycling, and environmental education. She also recently coordinated federal agency efforts to celebrate Earth Day 1990.

- Robin O'Malley is a Senior Policy Analyst. He joined CEQ in December 1989. Mr. O'Malley holds a Masters degree from Harvard University's Kennedy School of Government (1981) and a Bachelor's degree from the State University of New York (1979). His primary responsibilities at CEQ involve natural resource policy matters, including wetlands, coastal and water pollution/water management issues, global change and environmental research policy.

- David B. Struhs was appointed Staff Director of CEQ in June, 1989. Mr. Struhs holds an A.B. in Journalism and Political Science with a Certificate in African Studies from Indiana University (1982) and a Masters degree in Public Administration from the John F. Kennedy School of Government at Harvard University (1985). He was a Fulbright Fellow to Kenya in 1985. In Mr. Struhs' capacity as Staff Director, he directs an interdisciplinary staff of approximately 20 people which supports the Chairman.

- Lucinda Low Swartz was appointed in April 1990 as the Deputy General Counsel for CEQ. She also served in this capacity from 1986-1989. Ms. Swartz was graduated with highest honors in 1976 from the University of California at Riverside, where she was elected to Phi Betta Kappa. She received her law degree from the Washington College of Law at the American University in 1979. In her present position at CEQ, Ms. Swartz assists the General Counsel in resolving issues related to the implementation of the National Environmental Policy Act, including the application of CEQ regulations and guidelines to the federal agencies. Her other duties include assisting the Council Chairman with the preparation of budgetary and other financial materials, reviewing and monitoring major procurement efforts, and coordinating agency responses to requests from Congress.

ENVIRONMENTAL EDUCATION AWARDS

Mr. **Traxler**. Turning to page 5 of the justification, under the new program, "President's Awards for Excellence in Environmental Education," the President will give cash awards of up to $5,000 to two elementary or secondary school teachers from each State to stimulate and recognize the development of innovative and effective programs which teach students about environmental issues.

In your explanatory notes, we note that you plan to spend $500,000 for the Environmental Education Awards.

Do you plan to award the full $5,000 to each teacher or could it be up to that number, less than that number?

Mr. **Deland**. Up to that number.

It is worded that way because we want to preserve enough money for administrative costs and to be able to bring the award recipients to Washington for a ceremony.

Obviously there are some of those that, for such an honor, could afford to pay; others could not. We want to have the flexibility to provide those costs.

Mr. **Traxler**. Who is going to pick up the transportation and the housing costs for those invited winners?

Mr. **Deland**. That is what we need to work out.

We want to give as large an award as we can, but for those that need the transportation and housing costs, to pay it.

Mr. **Traxler**. I am concerned that we are looking at two from each State so we are talking about a hundred people. On average this is going to cost us, to bring those people to D.C., air fare round trip, lodging, and so on, you are looking at 10 percent of your program money for a photo op.

Mr. **Deland**. I think it is more than a photo op, that we have seen incomparable kinds of programs that there is an enormous dividend that does accrue from it.

Just the honor of having those people come, but as importantly, the cross fertilization that they get once they are here to be able to share the innovative programs——

Mr. **Traxler**. It sounds like you are doing a conference.

Have we just expanded this to two nights?

Mr. **Deland**. No, Mr. Chairman, we are not doing a conference.

I think during the course of a pressure-packed day, there can be the kind of cross fertilization that would be meaningful.

Mrs. **Boggs**. Mr. Chairman, you know we have support of challenge grants, or thank-you grants, whatever you would like to call them, in math and science and the teachers are brought to Washington from all over the country. It is amazing when you hear what they expect to use their grant moneys for.

Most of them use it to foster their further education or to help to foster the education of a bright student. They do learn a great deal from exchanging information with each other.

I think it is a very good program.

Mr. **Traxler**. We will want some details on the costs of that aspect of the program next year after you have run it through once.

We also ask you to provide for the record the criteria for choosing the award recipients.

[The information follows:]

Question. Provide for the record the criteria for choosing recipients of the Presidential Award for Excellence in Environmental Education.

Answer. The President's Award for Excellence in Environmental Education is intended to recognize and stimulate excellence in environmental education in Grades K-12. Two teachers from each state and one each from the District of Columbia and Puerto Rico will receive the award for advancing environmental education through innovative and effective programs.

Only teachers at public or private schools with primary assignment to classrooms at the primary or secondary levels (grades K-12) shall be eligible. Teachers may be in any discipline: English, Geography, Government, Science, etc.

Criteria to be used to select Presidential award recipients would include the teacher's background and experience; the creativity of teaching method or project; the transferability of method or project to other teachers; the effectiveness in increasing students' understanding of the environment; and the positive impact on peers, students and parents.

Mr. **Traxler**. Can you tell us which organizations you are going to work with to identify candidates? How you are going to determine who the winners are?

[The information follows:]

Question. What organizations are you going to work with to identify candidates?

Answer. Nominators (principals, teachers, parents, students), working with nominees, would be asked to complete a nomination form that addresses the selection criteria. States (working through the Governors' offices) would select four nominees as finalists. The District of Columbia and the Commonwealth of Puerto Rico would select two nominees as finalists. A national advisory committee, chaired by the Chairman of the Council, would select the final winners of the Presidential awards.

In addition to working with the Governors' offices, it is anticipated that the Council would seek assistance and information from various federal agencies, including the Environmental Protection Agency, the Department of Education, the Department of Health and Human Services, and the National Science Foundation. Other non-government organizations such as the National Wildlife Federation, the National Geographic Society, the National Education Association, the National Teachers' Association, and similar environmental and educational groups would also be consulted.

Mr. **Deland**. We are in the formative stages of doing that and felt we needed to get approval for the program before we spent a lot of time on details.

I would anticipate working with the various education associations in individual States, with the Governor's offices, and whomever.

I would certainly be open to any suggestions that you or the committee might have on those points.

Mr. **Traxler**. We learned long ago not to design programs.

Who will determine the final recipients?

Mr. **Deland**. That final cut will ultimately be made by me.

RENT PAYMENTS

Mr. **Traxler**. According to page 12 of the budget justification, projected rental payments will increase from $107,000 in fiscal year 1990 to $178,000 in fiscal year 1991, a $71,000 increase, or 66 percent. You indicate that this increase is to accommodate the additional FTEs. Yet, the rental payments for fiscal year 1990 only increased by $21,000 above the fiscal year 1989 level and you doubled your staff.

Why do you anticipate that rental payments will increase so dramatically?

Mr. **Deland.** The reason we were able to accommodate the doubling of the staff this last year is that there was a good deal of excess space in the existing CEQ building so that we did not have to pay what we otherwise might have as the staff increased.

MANAGEMENT FUND

Mr. **Traxler.** In turning to your Management Fund on page 18, you state that at its peak, the level of funding for the Environmental Policy Development Studies Division funded approximately 35 policy studies with a total cost of $1,500,000. For fiscal year 1989, however, the total was $100,000.

How many studies were underway in fiscal year 1989 that they only cost a total of $100,000?

Mr. **Deland.** I don't have that.

Ms. **Connell.** They were the continuation of studies that began in previous fiscal years, winding up with the closing of the interagency agreements and the actual contracts at the end of fiscal year 1989.

New studies alone in fiscal year 1989, I believe—and I would like to submit for the record later when I go back and check—there were two new studies.

[The information follows:]

Submitted for the Record. Studies initiated under the CEQ Management Fund in fiscal year 1989.

Answer. In FY 1989 the Council entered into interagency agreements for studies through the Management Fund with other federal agencies as follows:

Agency: EPA.
Amount: $40,000.
Purpose: EPA's contribution under this agreement was for support of the study entitled "Integrated Ecological Risk Management: A Cumulative Impacts Approach."

Agency: EPA.
Amount: $20,000.
Purpose: This was a new project established to develop the "CEQ/EPA Federal NEPA Symposium."

Agency: EPA.
Amount: $35,000.
Purpose: This was not a new study, but rather two amendments to an existing agreement to increase the level of effort and provide additional funds for the project entitled "Regulatory Analysis for Farmworker Protection." This project was initiated in FY 1985.

Agency: Fish and Wildlife Service.
Amount: $5,000.
Purpose: This was not a new study, but represented a contribution toward the editing and printing of the Environmental Trends report.

Mr. **Traxler.** When did this peak of 35 policy studies occur?

Ms. **Connell.** They began in fiscal year 1985, I believe, through fiscal year 1987, which would probably be the peak years.

Mr. **Traxler.** How many studies do you estimate for fiscal year 1990?

Ms. **Connell.** At this time, I know of only one project that we have entered into, the White House Conference on Science and Economic Research as it relates to global climate change but no other agreements have been entered into at this time.

It is, I think, hard to judge because of the quickness that these agreements often occur. They are interagency studies that will occur as environmental problems arise or focuses within the agencies occur.

NEPA IMPLEMENTATION

Mr. **Traxler**. On page 27 of the justification, it states that during fiscal year 1989, CEQ approved an amendment to National Environmental Policy Act procedures for the Department of Housing and Urban Development and is working with the Federal Aviation Administration on some possible changes.

What kind of changes would you like to see in the NEPA procedures for those agencies?

Ms. **Bear**. We routinely review all proposed amendments to NEPA procedures.

Many times those are changes and modifications to such things as categorical exclusions or new programs identified that require Environmental Impact Statements.

Some of the areas we are working with the FAA on include overflights over military lands in the West and North Carolina, and the coordination between the FAA and the military services for those kinds of actions.

Mr. **Traxler**. Overflights on military land?

Ms. **Bear**. The FAA, the services have an increasing need for overflight space over Federal lands, BLM lands——

Mr. **Traxler**. Training flights?

Ms. **Bear**. Yes. the FAA has to approve that.

Mr. **Traxler**. Low-level, tree-top missions?

Ms. **Bear**. Sometimes.

Mr. **Traxler**. The barn burners that every citizen loves—he killed my cow.

Is that noise pollution you are looking at on page 28 of the justification?

Ms. **Bear**. Yes.

GLOBAL CLIMATE CHANGE EFFORTS

Mr. **Traxler**. According to page 28 of the justification, draft guidance for considering stratospheric ozone depletion and global warming is currently undergoing Federal interagency review.

When do you expect the review to be complete and when will CEQ issue the final guidance on this issue?

Mr. **Deland**. That is hard to predict, Mr. Chairman, given the intense interest in that issue right now.

I would anticipate just as a rough guess that it will be at least another six months before we have any definitive answer on that.

Mr. **Traxler**. You don't know when it will be?

Mr. **Deland**. I can't say with specificity, no.

Mr. **Traxler**. What other agencies are involved in the interagency review?

Mr. **Deland**. With a host of agencies; the Department of Justice, the Department of Energy, the Department of Transportation, Department of Agriculture and Department of Interior.

Commerce, I believe, has attended—I know has attended several meetings.

Mr. **Traxler**. How does your role in this particular interagency effort differ from the Committee on Earth Sciences, which has done some very fine work?

It is an interagency panel and has published some preliminary reports.

What are you doing that is different?

Mr. **Deland**. Ours looks more to the legal as opposed to the scientific aspects of it, the legal aspects under the National Environmental Policy Act.

ACID PRECIPITATION

Mr. **Traxler**. Provide for the record a list of member agencies on the Interagency Task Force on Acid Precipitation and their proportional share of the total research budget for fiscal year 1990.

[The information follows:]

Question. Provide for the record a list of member agencies on the Interagency Task Force on Acid Precipitation and their proportional share of total research budget for FY 1990.

Answer. The National Acid Precipitation Assessment Program (NAPAP) was established by Congress in 1980 to coordinate the federal government's acid deposition research and monitoring activities. NAPAP, housed in the CEQ building on Jackson Place and operating through the CEQ Management Fund, oversees the 10-year, $500 million program.

Of the 12 NAPAP member agencies, six provide funding: the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, the Department of Energy, the Department of the Interior, the Department of Agriculture, and the Tennessee Valley Authority. The other agencies that comprise NAPAP are: the Department of State, the Department of Commerce, the Department of Health and Human Services, the National Aeronautics and Space Administration, the National Science Foundation, and the Council on Environmental Quality.

For FY 1990, interagency agreements have been executed (or are planned) with the agencies listed below to support the activities of NAPAP through the CEQ Management Fund:

	Cost	Percent
Environmental Protection Agency	$1,424,000	78
National Oceanic and Atmospheric Administration	0	0
Department of Energy	116,000	6
Department of the Interior	262,000	14
Department of Agriculture	0	0
Tennessee Valley Authority	36	2
Total	1,838,000	100

REFERRAL PROCESS

Mr. **Traxler**. Please indicate the status of all environmental disputes between Federal agencies referred to CEQ for final resolution.

Also, please tell us the status of those referrals described in last year's hearing record.

The information follows:]

QUESTION: Please indicate the status of all environmental disputes between federal agencies referred to CEQ for final resolution.

ANSWER:

The 15th Annual Report of the Council on Environmental Quality included a special report on the 22 referrals of interagency disagreements which CEQ had received and acted upon as of that time. The appendix to that special report, entitled Summaries of Referrals to CEQ, is attached.

Since the 15th Annual Report was published in 1985, there have been two additional matters referred to CEQ. In December, 1987, the Department of the Interior referred to the Council a proposal by the Department of the Navy (United States Marine Corps) to establish the Cherry I and Core Military Operating Areas (MOA) at Cherry Point, North Carolina. The primary issue raised in the referral was the potential noise impact on the Cape Lookout National Seashore which is managed by the National Park Service.

The Council held a public meeting in January, 1988, and provided an opportunity for written comments to be submitted for the Council's consideration. Council Chairman Hill conducted a site visit and held additional meetings in the area in May, 1988.

By letter dated September 13, 1988, the Council made several findings and recommendations (see 53 Fed. Reg. 36,357 (1988)). First, the Council was unable to conclude that there were any reasonable alternatives available to the Marine Corps for its low altitude, high speed training flights. Thus, the Council stated that the National Park Service and the Marine Corps should work together to mitigate the expected noise impacts on the seashore. As part of this resolution, the Marine Corps should undertake environmental monitoring studies which examine the actual impacts of the overflights on the park.

Second, the Council found that the cumulative effects of military airspace use over North Carolina had not been adequately considered, and that the Federal Aviation Administration (FAA), the agency which will give final authority for the overflights, must prepare a cumulative impact analysis as part of its NEPA documentation for the Cherry I and Core MOA designation request.

Finally, the Council found a need for coordination within the Department of Defense to adequately assess the cumulative impacts of the military agencies' airspace use requests, and a need for consideration of the inherent conflicts between airspace use and land use below. The Council also found that the FAA needs to play a larger role in the assessment of competing uses and of cumulative impacts of all its airspace designation decisions.

On February 3, 1989, CEQ received a referral from the Acting Administrator of EPA regarding the proposed renewal by the Department of the Interior Bureau of Reclamation of long-term water contracts for the Orange Cove and other Friant Unit irrigation districts of the Central Valley Project in the Central Valley of California. EPA recommended that a programmatic EIS be prepared to address the programmatic goals and cumulative impacts of alternative beneficial uses of Central Valley Project water, or, at a minimum, that an EIS be developed regarding the Friant Unit contract renewals.

CEQ held public meetings in Washington, D.C. and in Fresno, California, in April, 1989, to take comments on the issues raised in the referral. Written comments were also solicited. The Council published its Findings and Recommendations in the Federal Register on July 6, 1989 (*see* 54 Fed. Reg. 28,477 (1989)).

In its findings, the Council concluded that the Secretary of the Interior had sufficient discretion regarding the terms of the water contracts such that the renewal of those contracts constituted a "major federal action significantly affecting the quality of the human environment." Thus, CEQ recommended that the Bureau of Reclamation prepare EISs for each of the water service units of the Central Valley Project prior to renewal of the individual long-term water contracts in that unit, and that the Bureau should consider whether a programmatic EIS on all Central Valley Project long-term contracts would be useful.

Table 12-4. Referrals of Interagency Disagreements to CEQ

Project	Lead Agency	Referring Agency	Date of Referral
1. Shearon Harris Nuclear Power Plants Units 1–4, Wake & Chatham Counties, North Carolina	AEC	EPA	1/10/74
2. Phosphate Leasing on Osceola National Forest, North Central Florida	BLM	EPA	12/31/74
3. Oil & Gas Lease Sale No. 39, Northern Gulf of Alaska, Outer Continental Shelf	BLM	EPA	12/18/75
4. Permit Application by Deltona Corporation, Marco Island, Collier County, Florida	COE	EPA	3/15/76
5. Kaiparowits Power Plant, Kaiparowits, Plateau, Utah	BLM	EPA	6/4/76
6. Westside Highway Project, New York City, New York	FHW	EPA	2/14/77
7. Lake Alma Project, construction of water reservoir, Alma, Bacon County, Georgia	HUD	EPA	3/24/77
8. Wando & Cooper Rivers, Permit, Dredge, Fill, Construction—Marine Terminal, Charleston County, South Carolina	COE	EPA	4/20/77
9. County Trunk Highway "Q," Kenosha County, Wisconsin	FHW	EPA	12/9/77
10. Barge Terminal Expansion, Packer River Terminal, Dakota County, Minnesota	COE	EPA	1/11/78
11. Proposed Foothills Project, Colorado	BLM	EPA	1/17/78
12. Fire Island to Montauk Point, beach erosion control & hurricane protection project, New York	COE	DOI	3/7/78
13. Central and Southern Florida Flood Control Project, Hendry County, Florida	COE	DOI	3/9/79
14. I-84 & I-86, East Hartford-Manchester, Hartford County, Connecticut & Rhode Island	FHW	EPA	12/13/79
15. I-476, Mid-County Expressway, Delaware & Montgomery Counties, Pennsylvania	DOT	DOI	11/10/80

Table 12-4 Referrals of Interagency Disagreements to CEQ—Continued

Project	Lead Agency	Referring Agency	Date of Referral
16. Jackson Hole Airport, airport dispute, aviation noise, Jackson Hole, Wyoming	DOT	DOI & EPA	1/9/81
17. Elk Creek Dam, resulting in the prolonged period of increased turbidity in the Rogue River, Elk Creek Lake, Oregon	COE	DOI	1/19/81
18. Dickey-Lincoln Schools Lake Project, proposed dam of St. John River, Maine	COE	DOI	9/28/81
19. Palmdale International Airport, Los Angeles County, Palmdale, California	FAA	DOD	8/31/82
20. Presidential Parkway, Fulton & DeKalb Counties, Atlanta, Georgia	FHWA	ACHP	6/25/84
21. Tennessee-Tombigbee Wildlife Mitigation Plan, Alabama and Mississippi	COE	DOI	12/28/84
22. Corps of Engineers NEPA Procedures	COE	EPA	2/15/85

Mr. **Traxler.** Mr. Green?

POLLUTION PREVENTION

Mr. **Green.** Thank you, Mr. Chairman.

You mentioned pollution prevention as a priority. That is something that has been dear to this subcommittee.

It was our initiative to provide funding at EPA to set up the Office of Waste Reduction and the small grant program that goes with it.

Are you looking towards some statutory mission in the area?

The reason I raise that is that if you look at the municipal combuster proposal that EPA put forth in December, they did manage to find a handhold to try to impose recycling on those municipalities that would get a combuster's permit but I assume from their having to go that roundabout route that they lacked statutory authority to deal with those municipalities that are not going to be using combusters and going beyond that, that is recycling, it is not changing the way the inhabitants of the community live so as to reduce the waste stream that needs to be recycled or combusted or filled in the first place. It would seem that there is a significant statutory gap there and I wonder if the Administration proposes to fill it at any time in the near future?

Mr. **Deland.** As you know, there is legislation in draft form being prepared by EPA on pollution prevention. We have been working with them on that.

My feeling, however, is that if we are, in fact, to achieve substantial pollution prevention, that it can only come as a result of industry initiative and creativity.

I do not see a mechanism whereby the Federal Government or any level of government can enforce that in a precriptive command and control-type fashion.

So what we are proposing to do and have already started doing is working with various segments of industry to serve as a catalyst, as a stimulator to focus their attention on it and have met with some success already.

I have had meetings with the Chairman of duPont and other large companies and small companies and have been very pleasantly surprised by their interest in it.

I think their interest stems from two factors: One, that they generally want to be good corporate citizens; but secondly, they are increasingly seeing it in their economic interest to engage in pollution prevention that it does indeed pay as the 3M Corporation has demonstrated for some years now.

So I think we are seeing a very propitious melding of environmental and economic interests and I think there is a very vital role for CEQ to play in stimulating that.

Mr. **Green.** Thank you.

Mr. **Traxler.** Mrs. Boggs?

WETLANDS

Mrs. **Boggs.** I have one thing I would like to ask about, which, of course, is a consuming interest on the part of a Representative from Louisiana and that is the preservation and restoration of wetlands.

I was pleased to see that you will have an increased emphasis placed on wetlands.

As you know, our State contains about 40 percent of the nation's wetlands and we lose about 80 percent annually.

In fact, your 17th annual report refers to Louisiana's coastal marsh problems as "perhaps the most daunting of all regions."

As you know, a number of Federal agencies are involved in the wetland research and preservation activities.

Unfortunately, no one agency or person really seems to be taking the lead in coordinating all the efforts.

Do you have any suggestions as to how this situation can be improved?

Mr. DELAND. There is a task force within the Domestic Policy Council that is focused on just precisely that issue.

The President, as you know, is committed to a no-net-loss goal of wetlands and it is that Domestic Policy Council group that is charged with implementing that goal.

To find the ways to implement it in an equitable fashion will not be easy, as you well know.

States such as yours, and Alaska, have very unique and particular problems, and a solution will not come easily.

What we are in the stages of planning is a series of public hearings around the country to elicit information, particularly from Louisiana and from Alaska to feed into this Domestic Policy Council process.

We are hopeful that we can in the course of the next year come up with a forthright plan to achieve that goal.

Mrs. BOGGS. As you know, late last year, the EPA and the Army Corps of Engineers signed a memorandum of agreement.

What role do you suppose this document will play in the implementation of the President's no-net-loss wetlands policy?

Mr. DELAND. It will play a role, but a comparatively minor role.

The wetlands that that document addresses comprise approximately 20 percent of those in the country. The other 80 percent are largely in agricultural areas.

That document itself was not intended to address the goal and there will clearly have to be amendments in the 20 percent of the wetlands upon which it focuses.

ANTARCTICA

Mrs. BOGGS. One of the projects you are interested in and that I am very interested in is the agency's participation in a working group examining how best to interpret and implement the convention on the regulation of Antarctic mineral resource activities.

Can you point out for us what some of your plans are in these regards?

Mr. DELAND. We are working on that group.

Obviously at least from my perspective, that is a very valuable and precious part of this planet and needs to be zealously guarded and it is with that philosophical underpinning or approach that we are initiating or spearing into those discussions.

Mrs. **Boggs**. Thank you, Mr. Chairman.

Mr. **Traxler**. Thank you.

That concludes the hearing of the subcommittee for today.

Thank you all very much.

[The justification follows:]

President's Budget Request
Fiscal Year 1991

Executive Office of the President
Council on Environmental Quality
Office of Environmental Quality

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY
BUDGET SUBMISSION
FY 1991

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

FISCAL YEAR 1991 BUDGET

I. Overview

The Council on Environmental Quality and the Office of Environmental Quality (herein collectively termed CEQ) are requesting a budget authority of $2,780,000 for fiscal year 1991 and personnel ceiling of 34 FTEs. This amount increases the capability to meet existing and added responsibilities as environmental advisor to the President and for other statutory obligations. CEQ serves as a source of environmental expertise for other organizations within the Executive Office of the President and provides for coordination and policy analysis of environmental programs of the federal government.

Major objectives of CEQ include the following:

- Advise the President on national and international policies to foster and promote the improvement of environmental quality;
- Assist and advise the President in the preparation of the annual Environmental Quality Report;
- Conduct studies and make recommendations on policy and legislation as requested by the President;

- Provide general leadership and support to the coordination of activities of the federal departments and agencies which affect, protect and improve environmental quality;
- Oversee federal agency implementation of the environmental impact assessment process and referee interagency disputes on when to conduct assessments.
- Foster cooperation between the federal and local government, the private sector and the environmental community.
- Administer the President's Awards for Excellence in Environmental Education, recognizing teachers who design and implement the most innovative and effective programs to teach students about the environment.

II. Narrative Statement

Background Data

CEQ was established by Congress under the National Environmental Policy Act of 1969 (NEPA). OEQ was established in the Environmental Quality Improvement Act of 1970 to provide professional and administrative staff for the Council. The Chairman of CEQ serves as the Director of OEQ.

CEQ was permanently authorized in NEPA for $1,000,000. OEQ must be periodically reauthorized. Reauthorization of OEQ is currently pending for $1,000,000 for fiscal years 1989 and 1990 (H.R. 1113) and for $1,000,000 for fiscal years 1989 and 1990 and $1,500,000 for fiscal years 1991, 1992 and 1993 (S. 1089) in the 101st Congress. The OEQ "Management Fund" is authorized to receive payments from other agencies to finance studies jointly sponsored by OEQ and other federal agencies and federal interagency projects in which OEQ participates.

Responsibilities

The FY 1991 budget continues the rebuilding of CEQ that began in FY 1990. The President has significantly increased his reliance upon CEQ for environmental advice and has called upon CEQ to coordinate and develop policy in line with the Administration's emphasis on environmental quality. The FY 1991 budget meets the Administration's commitment to staff CEQ at a level of 34 FTEs.

Presidential Advisor

The CEQ Chairman advises the President on national and international environmental issues. CEQ develops and recommends policies and legislation to the President for protecting and improving the quality of the environment.

Coordination

The CEQ Chairman is a participant in meetings of the Domestic Policy Council, the Economic Policy Council, and select meetings of the National Security Council. The chairman serves on various working groups by himself or through designees. CEQ provides leadership and management to committees on environmental issues, and facilitates interagency coordination. CEQ is a Joint Chair of the Interagency Task Force on Acid Precipitation and CEQ is Co-Chair of the Interagency Toxic Substances Data Committee.

CEQ has undertaken a substantial obligation to provide the perspective of the Executive Branch on environmental policy to Congress, national and international leaders, and the public. The Chairman and staff meet frequently with representatives of federal agencies and interest groups, as well as individuals, to discuss the merits and environmental consequences of particular federal policies, programs, and activities.

Report Preparation

Under section 201 of the National Environmental Policy Act (NEPA), the President is required to transmit annually to the Congress an Environmental Quality Report. Section 204 of NEPA enumerates eight specific duties and functions of the Council, the first of which is to assist and advise the President in the preparation of the Environmental Quality Report.

National Environmental Policy Act §102

CEQ promulgates the regulations which implement the environmental impact assessment process under NEPA and which are binding on all federal agencies. CEQ acts as the final administrative authority interpreting NEPA, and carries out this responsibility through a number of oversight activities. CEQ assists federal agencies in the resolution of disputes concerning environmentally unsatisfactory proposals referred to the Council.

Environmental Data and Analysis

CEQ compiles and publishes information on trends in the environment data and the methodology for analyses of environmental data. CEQ is strengthening its capabilities for coordinating the government's collection, interpretation, and dissemination of environmental data.

President's Awards for Excellence in Environmental Education

A new program in FY 1991 is the President's Awards for Excellence in Environmental Education. The President will give cash awards of up to $5,000 to two elementary or secondary school teachers from each state. The awards program is designed to stimulate and recognize the development of innovative and effective programs which teach students about the environmental issues and responsibilities. CEQ will administer the program and will work with national, state and local organizations to identify candidates.

International Environmental Policy

CEQ assists in implementing the President's international environmental commitments. For example, the CEQ Chairman is Co-Chairman of the White House Seminar on Science and Economics Research Relating to Global Change and serves on the Domestic Policy Council's Working Group on Global Climate Change. CEQ participates in the deliberations of bodies such as the Intergovernmental Panel on Climate Change (IPCC), the Organization for Economic Cooperation and Development (OECD), the Economic Commission for Europe (ECE), the European Community (EC) and the United Nations Environment Programme. CEQ oversees procedures to assess the environmental impacts of federal activities outside the borders of the United States. CEQ serves as U.S. Co-Chair for Legal & Administrative measures for Protection of the Environment under the US-USSR Environmental Agreement, and U.S. Co-Chair for the Environmental Impact Assessment Project under the U.S.-Japan Environmental Agreement.

Environmental Management Policy

CEQ has oversight for the implementation of Executive Orders on the use of offroad vehicles on federal lands (EOs 11644 and 11989) and on the environmental effects of major federal actions abroad (EO 12114). CEQ is strengthening its capabilities for development of environmental management policy in the areas of natural resources, energy and integrated environmental management.

Other

CEQ's responsibilities will continue to grow due to increased emphasis on issues related to environmental quality such as:

- Global Climate Change
- Preservation of Wetlands
- Biological Diversity
- Pollution Prevention

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

BUDGET OVERVIEW

(In Thousands of Dollars)

	FY 1989 Actual	FY 1990 Estimated Level	FY 1991 Requested
Budget Authority	850	1,500	2,780
Outlays	769	1,420	2,655
Full-time Equivalent Employment	10	20	34

III. Appropriation Language

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

Salaries and Expenses

For necessary expenses of the Council on Environmental Quality and the Office of Environmental Quality, in carrying out their functions under the National Environmental Policy Act of 1969 (Public Law 91-190), the Environmental Quality Improvement Act of 1970 (Public Law 91-224), and Reorganization Plan No. 1 of 1977, including not to exceed $2,000 for official reception and representation expenses, and hire of passenger motor vehicles, $2,780,000. (Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1991.)

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

Program Statement

The Council on Environmental Quality and the Office of Environmental Quality analyze important environmental conditions and trends; review an appraise Federal Government programs having an impact upon the environment; develop and recommend policies and legislation to the President for protecting and improving the quality of the environment; assist in coordinating Federal environmental programs which involve more than one agency; and assist in the preparation of the President's annual report to Congress. CEQ will also administer a new award program for excellence in environmental education.

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

Program and Financing
(In Thousands of Dollars)

	FY '89 actual	FY '90 estimate	FY '91 estimate
Program by activities:			
Direct program: Environmental policy development and program evaluation	845	1,465	2,780
Reimbursable program	96	...	...
Total obligations	941	1,465	2,780
Financing:			
Offsetting collections from:			
Federal funds	-96	...	...
Unobligated balance lapsing	5	...	...
Budget authority (appropriation)	850	1,500	2,780
Appropriation pursuant to P.L. 101-144		-23	
Appropriation pursuant to P.L. 99-177		-12	
Appropriation adjusted		1,456	
Relation of obligation to outlays:			
Obligations incurred, net	845	1,465	2,780
Obligated balance, start of year	205	281	...
Obligated balance, end of year	-281	-281	...
Outlays	769	1,465	2,780

SUMMARY OF BUDGET AUTHORITY AND OUTLAYS

Enacted/requested............................	850	1,500	2,780
Budget authority.............................	850	1,500	2,780

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

Object Classification
(In Thousands of Dollars)

	FY 89 actual	FY 90 estimate	FY 91 estimate
Direct obligations:			
Personnel compensation: Full time permanent	490	959	1,540
Personnel benefits:			
Civilian	77	218	302
Travel	16	51	70
Transportation of things	6	10	20
Standard level user charges ..	86	107	178
Communications, utilities, and other rent	22	35	55
Printing and reproduction	26	30	45
Other services	37	35	545
Supplies and materials	18	10	15
Equipment	67	10	10
Subtotal, direct obligations	845	1,465	2,780
Reimbursable obligations	96	...	...
Total obligations	941	1,465	2,780

EXECUTIVE OFFICE OF THE PRESIDENT
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Personnel Summary

	FY 1989 actual	FY 1990 estimate	FY 1991 estimate
Direct:			
Total Number of full-time permanent positions	8	20	34
Total Compensable workyears:			
Full-time equivalent employment	9	20	34
Reimbursable:			
Total Number of full-time permanent positions	1	...	...
Total Compensable workyears:			
Full-time equivalent employment	1	...	...

IV. Explanation of and Justification of Changes By Object Classification for FY 1991

Executive Office of the President
Council on Environmental Quality
Office of Environmental Quality

(In Thousands of Dollars)

FY 90	FY 91		Increase
1,465*	2,780	1. **Personnel Compensation and Benefits** **The budget authorization for FY 1991 brings CEQ to 34 FTEs including the Chairman, professional and support staff. The additional staff will enable CEQ to adequately fulfill the broad range of CEQ activities in the areas of responsibility.**	1,315
51	70	2. Travel of Persons An increase of $21,000 is anticipated due to increased costs associated with airline fare (especially for foreign travel), for increased per diem rates, and for the increase in CEQ staff.	21
10	20	3. Transportation of Things An increase of $10,000 is anticipated to increased costs associated with the increased CEQ staff.	10

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*Includes adjustments pursuant to $1,465,00 for P.L.101-44 and P.L.99-177

FY 90	FY 91		Increase
107	178	4. Rental Payments to GSA (SLUC) Increased costs in this category are for increased office space for FTEs.	71
35	55	5. Communications, Postage Increased costs in this category are for increased utilization with 34 FTEs.	20
30	45	6. Printing and Reproduction Increased costs in this category are for increased utilization with 34 FTEs.	15
35	545	7. Other Services An amount of $500,000 is authorized to provide cash awards to the recipients of the environmental education awards. The additional costs in this category are for basic equipment maintenance contracts and minor alterations of work space.	510
10	15	8. Supplies and Materials Increased costs in this category are for increased utilization with 34 FTEs.	5
10	10	9. Equipment No increased costs anticipated.	0

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL QUALITY

MANAGEMENT FUND

I. Narrative Statement

A. Background

The statutorily established Management Fund account authorizes the financing of study contracts that are jointly sponsored by CEQ and one or more other federal agencies, and federal interagency environmental projects (including task forces) in which the CEQ participates. The fund operates under policies and procedures established to maintain financial integrity and accountability. All activities require the approval of the CEQ Chairman.

The Management Fund is divided into program divisions for accounting and budget presentation purposes: Division 100 -- Environmental Policy Development Studies and Projects, and Division 200 -- Interagency Task Force on Acid Precipitation (ITFAP) which operates the National Acid Precipitation Assessment Program (NAPAP). The NAPAP Office of the Director operates through the Management Fund.

CEQ oversees the management fund and provides for oversight, technical evaluation, administrative assistance, conference facilities and occasionally limited financial support. Co-sponsoring federal agencies provide financial resources on a project basis by means of interagency agreements. The co-sponsoring agency may also name a project officer to perform technical evaluations and assist in contract management. CEQ can transfer funds from its regular appropriation account into the Management Fund to co-sponsor select projects.[1]

B. Objectives

The Management Fund is important to CEQ in fulfilling its policy and coordination responsibilities described above in section II. of this budget request It facilitates the participation of other federal agencies and the combination of financial resources for studies of mutual benefit. It is a mechanism that provides CEQ with rapid access to a wide range of specialized expertise available through federal procurement procedures.

C. Projected Activity for FY 1991

1. Division 100 (Environmental Policy Development Studies and Projects)

Division 100 studies are difficult to budget on an fiscal year basis for two reasons. First, the resources are typically one-year money intermittently received through interagency transfer during the fiscal year. The initiation of a special study or project is dependent upon fund availability and the relative priority of the subject matter. Second, the work revolves around emerging issues and new developments not known beforehand. As such, there is not sufficient advance notice for normal budgeting on a project basis. The plans for individual studies and projects are developed with a three-to-six month lead time, on average. Indeed, one of the purposes of the Management Fund is to allow the government to respond rapidly to developing environmental concerns.

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[1] The Management Fund procedures forbid the transfer of funds from the Management Fund to the appropriations account.

It is possible, however, to project the range of likely activity based on historical precedents and general program goals. At its peak, the level of Division 100 funding per year was for approximately 35 policy studies with a total annual cost for all projects ranging of $1,500,000. The FY 1989 total was $100,000.

2. Division 200 (Interagency Task Force on Acid Precipitation)

Division 200 activities are subject to annual budget projections as the Office of the Director of NAPAP must budget its operations for the coming year as if it were an agency. The NAPAP Joint Chairs Council, representing NAPAP's major funding agencies, has approved a total NAPAP 1990 budget request of $1,800,000, which is apportioned to individual participating agencies. Based on each agencies' proportional share of the total research budget, funds to support the Office of the Director are transferred to the Management Fund for financial management of NAPAP's coordinating activities. In fiscal year 1989, the budget for the NAPAP Office of the Director totaled $1,603,000, not including personnel compensation and benefits.

The program expenses for NAPAP's Office of the Director are different from those for contract studies. NAPAP operates as an independent accounting entity from its member agencies. Several federal agencies contribute funds (through interagency agreements) and detail personnel to support ITFAP activities. The Office of the Director pays for its non-personnel administrative costs and contract expenses from the Management Fund account.

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Management Fund

Program Statement

The fund finances study contracts that are jointly sponsored by the Office of Environmental Quality and one or more Federal agencies and Federal interagency environmental projects (including task forces) in which the Office participates.

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MANAGEMENT FUND

PROGRAM AND FINANCING
(Dollars in Thousands)

	FY 89 actual	FY 90 estimate
Program by activities:		
Total obligations (object class 25.0) ...	1,447	1,800
Financing		
Offsetting collections from:		
Federal funds	-1,738	-1,800
Unobligated balance available, start of year	-256	-547
Unobligated balance available, end of year	547	547
Budget authority (appropriation)	...	...
Relation of obligations to outlays:		
Obligations incurred, net	291	
Obligated balance, start of year	819	1086
Obligated balance, end of year	-1086	-1086
Outlays	- 558	

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VI. A Summary of Accomplishments in FY 1989

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SECTION B. COORDINATION
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SECTION G. INTERNATIONAL ENVIRONMENTAL POLICY

A SUMMARY OF ACCOMPLISHMENTS IN FY 1989 BY THE COUNCIL ON ENVIRONMENTAL QUALITY

SECTION A. NATIONAL ENVIRONMENTAL POLICY

CEQ is involved in the consideration, preparation and review of drafts of environmental statements, Executive Orders, decision memoranda, and other items involving environmental quality. The CEQ Chairman represents the Executive Branch at official national and international meetings concerned with environmental affairs. This year numerous meetings were held with representatives of science, industry, agriculture, labor, conservation and environmental organizations, state and local governments, and other groups.

SECTION B. COORDINATION

1. Executive Office of the President

CEQ participated in meetings of the Domestic Policy Council and the Domestic Policy Council's Working Group on Energy, Natural Resources, and Environment. CEQ assisted in the review and development of policy issues and in the preparation of briefing papers for the DPC.

CEQ also served as Chairman of the Domestic Policy Council's Task Force on Outdoor Recreation Resources and Opportunities that conducted a major analysis of the Reagan Administration's recreation policy and produced. CEQ provided follow-up to the report, Outdoor Recreation in a Nation of Communities that was the Reagan Administration's action plan for Americans outdoors.

CEQ served on two OSTP committees. CEQ provided environmental quality perspective for the Committee on Life Sciences that discussed issue of international regulatory and policy aspects of biotechnology and risk assessment. The Committee on Earth Sciences provides for interagency coordination to increased overall effectiveness and productivity of federal research efforts directed toward an understanding of the Earth as a global system. This understanding is critical to environmental quality and particular "global climate change issues."

CEQ continued in its capacity as Joint Chair of the Interagency Task Force on Acid Precipitation (ITFAP).[1] The Council coordinates with agencies in the Executive Office of the President and federal agencies concerned with acid precipitation to insure that the federal research effort is responsive to major policy questions being asked by Congress and other policy makers. CEQ meets on a continuing basis with those government agencies having responsibilities for acid precipitation-related programs. CEQ oversees the activities facilitates the financial management of interagency activities in support of the program.

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[1] ITFAP carries out the National Acid Precipitation Assessment Program (NAPAP) with funds appropriated to individual agencies in accordance with a mutually-agreed upon research plan.

CEQ advised OMB in the coordination and clearance process of proposed policy and legislation related to environmental quality.

2. Other Interagency Committees

CEQ co-chairs the Interagency Toxic Substances Data Committee (ITSDC), a part of the Interagency Testing Committee established by the Toxic Substances Control Act. Other ITSDC members are the key regulatory and policy agencies of the federal government with responsibility for toxic substances regulation.

CEQ serves on the Marine Pollution Control Board of the National Oceanic and Atmospheric Administration to assist in interagency efforts to protect the marine environment.

SECTION C. REPORTS

CEQ assists the President in preparing the annual Environmental Quality report to Congress on the status of the environment. The report describes: current trends in the quality of the environment; the adequacy of available natural resources for fulfilling human and economic requirements in light of population pressures; the programs and activities of federal, state, and local governments and other entities and the effect of those programs and activities on the environment; and the need to remedy deficiencies of existing programs and activities. In carrying out this mandate, the Council coordinates, interprets, and assembles data and information on environmental quality. The report also contains CEQ's findings which have been developed

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The ITFAP is jointly chaired by EPA; the Departments of Agriculture (USDA), Energy (DOE), and the Interior (DOI); the National Oceanic and Atmospheric Administration (NOAA); and CEQ. Other statutory members are the Tennessee Valley Authority (TVA), the Department of Commerce, the Department of Health and Human Services, the National Science Foundation, the Department of State, and the National Aeronautics and Space Administration. Seven federal agencies share decision and budgetary authority over NAPAP: EPA, USDA, DOE, DOI, NOAA, TVA, and CEQ. The NAPAP Office of the Director operates through the OEQ Management Fund and is housed within CEQ's office space.

through its own studies and activities authorized by NEPA and other directives.

The 17th Environmental Quality report of the Council on Environmental Quality for the year 1986 was published and released on fall 1988. The report focused on lands and resources that are managed for their "natural" values and are subject to special protections or reserved uses (i.e., birdlife of the United States, wetlands, marine sanctuaries, and the public recreation lands). A comprehensive statistical appendix corresponding to the second Environmental Trends report was also included, and will become a standard feature permitting annual updated information to track programs on a number of environmental fronts. In addition, the 17th annual report contained an appendix on NEPA §102 implementation. Copies of the report were distributed to Members of Congress and federal and state agencies. Additional copies were printed to be made available to the public through the Government Printing Office and to the Depository Library System.

The 18th and 19th Environmental Quality reports for years 1987 and 1988 were published in a combined volume in spring 1989. The 18th report focussed on "man-made" environments that are intensively used, often disturbed or degraded, some of which have been restored or are recovering (e.g., urban air, solid waste landfills, groundwater). The 19th report for the year 1988 will focus on lands that are "altered" to some extent (e.g., for farming, ranching, mining), but are not heavily populated. The reports also contain information on NEPA §102 implementation by the federal agencies.

CEQ has begun preparation of the 20th Environmental Quality report for the year 1989. The 20th annual report will provide an opportunity for a perspective on 20 years of NEPA implementation and of environmental protection by federal, state, local, and private entities.

CEQ published Risk Analysis: A Guide to Principles and Methods for Analyzing Health and Environmental Risks. This book provides a basic understanding of risk analysis with glossary and other materials including copies of important federal guidelines used for risk assessment.

SECTION D. NATIONAL ENVIRONMENTAL POLICY ACT §102

The "NEPA process" refers to the requirement in Section 102 of NEPA that all federal agencies assess the environmental impacts of proposed major federal actions significantly affecting the quality of the human environment. Overseeing the implementation of this requirement is one of the agency's most important missions. Pursuant to Executive Order No. 11991 (1977) CEQ developed a set of binding regulations to implement NEPA which would reduce paperwork and delay and improve the decisionmaking process. Regulations were promulgated in 1978 and became effective and binding on all federal agencies in 1979. In 1981, the agency reviewed the regulations and determined that no major changes were needed in them. In 1983, CEQ issued guidance relating to several issues covered in the NEPA regulations. In FY 1985, the Council proposed an amendment to the regulation which deals with incomplete or unavailable information. After several public meetings and a public comment period, CEQ amended that regulation; the change became effective in May, 1986. That amendment was recently upheld in a unanimous decision of the U.S. Supreme Court. No further amendments to the NEPA regulations are currently contemplated.

Referrals Under §309 of the Clean Air Act

Section 309 of the Clean Air Act and the CEQ's regulations implementing the procedural provisions of NEPA directs the Administrator of the Environmental Protection Agency (EPA) to review and comment publicly on the environmental impacts of federal activities, including proposed regulations published by a department or agency. If, upon review, the "Administrator determines that the matter is unsatisfactory from the standpoint of public health or welfare or environmental quality, section 309 directs that the matter be referred to the Council." 40 C.F.R. §1504.1(b). Other federal agencies may make similar reviews of environmental impact statements and may ask the Council to make findings and recommendations regarding the acceptability of the anticipated environmental effects. See 40 CFR §1504.1(c).

Referral from the Environmental Protection Agency Regarding the Department of the Interior's Bureau of Reclamation to Renew Long-Term Water Contracts for the Orange Cove and other Friant Unit Irrigation Districts of the Central Valley Project in California

On February 3, 1989, CEQ received a referral from the Acting Administrator of EPA, regarding the proposed renewal by the Department of the Interior Bureau of Reclamation of long-term water contracts for the Orange Cove and other Friant Unit irrigation districts of the Central Valley Project in the Central Valley of California. EPA recommended that a programmatic EIS be prepared to address the programmatic goals and cumulative impacts of alternative beneficial uses of Central Valley Project water, or, at a minimum, that an EIS be developed regarding the Friant Unit contract renewals. CEQ held a public meeting in Washington, D.C. and in Fresno, California, in April of 1989 to take comment on the issue raised in the referral, and also provided for a written comment period. CEQ's Finding and Recommendations were published in the Federal Register on July 6, 1989.

Approval of Federal Agencies' NEPA Procedures

In accordance with the CEQ regulations (40 C.F.R. §1507.3), federal agencies consult with and obtain the approval of the Council in promulgating or amending their NEPA implementing regulations. CEQ reviews agency regulations and amendments for conformity with NEPA and the CEQ regulations. During FY 1989, CEQ approved amendments to NEPA procedures for the Department of Housing and Urban Development and is currently working with the Federal Aviation Administration regarding possible changes to the NEPA procedures for that agency.

Emergency Exemptions Under NEPA

The CEQ regulations implementing NEPA permit exceptions to the normal process in emergency situations. In FY 1989, CEQ granted an emergency exemption to the U.S. Fish and Wildlife Service for destruction of fish exposed to Viral Hemorrhagic Septicemia at the Makah National Fish Hatchery in the State of Washington.

Adequacy of Environmental Reviews

One of CEQ's primary missions is to oversee federal agency compliance with NEPA. CEQ/OEQ is frequently called upon to examine a federal agency's NEPA compliance or to assist an agency with its NEPA compliance for a specific proposal. Much of this work is done on an informal basis, as the result of requests from government agencies, state or municipal officials, and private citizens. Some of the NEPA compliance issues with which CEQ was involved in FY 1989 and is currently involved include consultation with the Defense Nuclear Agency regarding NEPA compliance for proposed Deep Underground Testing, discussion with the U.S. Fish and Wildlife Service regarding the scope of a programmatic environmental impact statement for the National Wildlife Refuge System, consultation with the Arctic Research Commission regarding methods of improving scientific content and review of NEPA documents, and responding to citizen complaints about NEPA compliance in relation to proposed airport expansion.

NEPA Publications

During FY 1988, CEQ held a conference, co-sponsored with the Environmental Law Section of the New York State Bar Association, on the preparation and review of environmental impact statements. In FY 1989, proceedings of that conference were published and distributed.

The 18th and 19th Environmental Quality Reports contain appendixes which summarize significant 1987 and 1988 judicial decisions relating to NEPA compliance, as well as CEQ's oversight activities for those years.

Guidance for Considering Stratospheric Ozone Depletion and Global Warming

CEQ held a series of public meetings to hear from scientists and other experts on the related issues of stratospheric ozone depletion and global warming, and a meeting with representatives of several federal agencies and members of the public to discuss whether and to what extent these environmental phenomena should be addressed in NEPA documents. In FY 1989, CEQ issued draft guidance on this subject. At the present time, the draft is undergoing federal interagency review.

NEPA 20th Year Events

The 20th anniversary of the enactment of NEPA falls within FY 1989. CEQ is coordinating, and sponsoring various activities designed to commemorate the event, to encourage federal agencies to comply with the letter and the spirit of the law, and to educate the public regarding the important participatory aspects of the statute.

SECTION E. ENVIRONMENTAL DATA AND ANALYSIS

Environmental Trends Report

In FY 1984, CEQ began an interagency effort to update information about environmental data sources that are available, and to produce a second Environmental Trends report. CEQ continued the central coordinating role in developing the first report and co-sponsoring its initial publication in 1981. The revision of the report at 5-year intervals was deemed a meaningful time period for discernable trends to develop. Through the use of maps and charts, the report is designed to portray quantitatively the current conditions and trends in the quality of the environment.

An interagency working group for the second report was established in late FY 1985, with membership from approximately 15 agencies. Multi-agency funding was begun and a support contract awarded. The contract was awarded to NUS Corporation to conduct background studies and propose alternatives for the organization and content of the report.

The interagency working group continued to meet frequently in FY 1987 and FY 1988 for planning and evaluation of draft products. Other support contracts were let for graphics and editorial assistance. Although work continues, progress on the report has been greatly hampered by a lack of funds. Publication of the report is anticipated in FY 1989.

As another facet of this activity, recommendations will be made for improvements in data and monitoring, based on deficiencies noted during the process of seeking and securing information, and for institutionalizing the reporting of key environmental variables for use in future assessments of environmental trends.

Risk Assessment

CEQ has conducted activities related to risk assessment and environmental impact assessment. The Council has developed and published Risk Analysis: A Guide to Principles and Methods for Analyzing Health and Environmental Risks. In addition, the Council has participated with the National Science Foundation in a review of the scientific bases of risk assessment to improve consistency in approaches used by federal agencies and has hosted meetings of the experts developing the report.

Cumulative Impact Assessment

CEQ has also initiated a review of cumulative impact assessment as a component of environmental impact assessments prepared in the United States and in other countries. Cumulative impact assessment poses special challenges. Large scale issues of time and space (global/regional) present real concerns and almost limitless hypothetical environmental impacts. Topical short-term and longer-term effects of particular projects or activities include global warming, sea level rise, and ozone layer depletion. Assessment is difficult because of the complexities of distinguishing real from hypothetical concerns, assessing unquantifiable environmental amenities, and handling vast uncertainty.

CEQ has prepared an inventory of cumulative assessment-related activities conducted by federal agencies with assistance from the Conservation Foundation. In November, 1988, the Council convened a meeting of federal agency representatives concerned with cumulative impact assessment that developed an agenda for interagency coordination and technical meetings related to cumulative impact assessment. The inventory and a summary of the interagency meeting were published and distributed.

As follow-up CEQ has begun a process to develop materials that could principles or guidance for cumulative impact assessment. Based on the results of November 1988 workshop, CEQ has commissioned the develop of additional conceptual material including a description of the relationship between the cumulative impact analysis and the decision under consideration. The Environmental Protection Agency has participated in planning and has provided additional funding.

Environmental Impact Assessment and Emerging Technology

CEQ periodically receives questions regarding the National Environmental Policy Act (NEPA) requirements for various R&D activities. The range of issues extend from concern that complying with NEPA will delay or discourage important R&D to counter concern that R&D activity is excluded from NEPA. In order to share information among the agencies related to R&D, CEQ is developing materials relating to these issues, and will hold an interagency meeting. As an initial step, CEQ is collecting examples of agency approaches to R&D, and pertinent case law. Once we have collated this information, we are planning an interagency meeting to exchange information.

In response to questions regarding environmental impact assessment for various R&D activities, began a process to provide additional information. CEQ conducted an interagency meeting was held in May with review of legal requirements and cases presented by a panel of attorneys from the Justice Department. A second interagency meeting was held in July with the Forest Service leading a discussion of its approach.

SECTION F. ENVIRONMENT MANAGEMENT POLICY

Toxic Substances

Current agency activities have been focused on two primary areas. One is the technical responsibility associated with toxic substances and chemicals of environmental concern. CEQ is a statutory member of the Interagency Testing Committee (ITC). The ITC, established under the Toxic Substances Control Act, is charged with recommending to the EPA Administrator chemical substances which should be given priority consideration for promulgating health and environmental testing rules.

In addition, the Chairman of CEQ serves as a joint chairman, along with the Administrator of EPA, of the Interagency Toxic Substances Data Committee. This Committee was established to improve coordination in the generation, sharing, and management of information about chemical substance life cycles and effects upon the environment.

Representatives of CEQ/OEQ attend the meetings of both the ITC and the Interagency Toxic Substances Data Committee on a regular basis.

SECTION G. INTERNATIONAL ENVIRONMENTAL POLICY

CEQ in conjunction with the Executive Office of the President works cooperatively with other agencies in developing international environmental policy. CEQ also interacts with representatives of foreign governments and international organizations about mutual interests concerning conservation of the world's resources. Moreover, the Council serves as the coordinating body for reviewing international requests for environmental information and consolidating the views of the various federal agencies into a United States position.

CEQ provides information and interpretation of Executive Order No. 12114 which outlines policies and procedures for assessing the environmental effects of major actions of the federal government which take place abroad. The Executive Order provides for different types of procedures depending on (1) whether the action would take place in the global commons or in another country which is not participating in the action; (2) whether the action involves a product which is strictly regulated by federal law because of its toxic or radioactive properties; or (3) whether it is an action affecting certain resources which can be designated for protection by the President or international agreement.

Economic Commission for Europe

The ECE has directed an ad hoc working group to prepare draft elements for a Framework Agreement on Environmental Impact Assessment in a Transboundary Context. CEQ has been and continues to be involved in the process of drafting and reviewing the proposed framework.

United Nations Environmental Programme

In FY 1989, the Council has continued to work with the United Nations Environment Programme (UNEP) on issues relating to global warming, species preservation, regional seas, and environmental impact assessment. CEQ will participated in the 1989 meeting of the UNEP Governing Council.

Sundance Symposium on Global Climate Change

At the Sundance Symposium on Global Climate Change, the Chairman of CEQ conveyed a Presidential message regarding the administration's response to understanding and solving such environmental problems.

Intergovernmental Panel on Climate Change

The Intergovernmental Panel on Climate Change (IPCC) was established in late 1988 by the World Meteorological Organization and the United Nations Environment Program. The US has been a major force in the establishment of the IPCC and in the activities of its three working groups. The US chairs the Response Strategies Working Group. CEQ has been a participant in interagency activities related to the IPCC and CEQ has been a delegate to the RSWG.

The Organization for Cooperation and Development

CEQ has been actively involved with the Organization for Cooperation and Development (OECD). CEQ was a delegate to the Committee for Science and Technology Policy meeting in October 1988 and meetings of the OECD Group of National Experts on Safety in Biotechnology held in April and June of 1989. CEQ has been a major force in the formation of the OECD's draft guidelines for good development practices associated with biotechnology. CEQ has conducted activities for the exchange of information with the OECD's Environmental Directorate.

The European Communities

The EC is engaged in activities related to environmental assessment and biotechnology that have been of interest to CEQ. CEQ participated in discussions in Brussels with the EC regarding implementation of its directive on environmental assessment CEQ has been involved with an interagency group responding to proposed EC directives in biotechnology. CEQ has met with EC representatives in bilateral discussion on biotechnology held in Washington.

Canada

The Canadian Environmental Research Council (CEARC) is in certain respects a counterpart to CEQ. Representatives of CEARC attended the CEQ meeting on cumulative impact assessment held in November 1989. CEARC and CEQ have been meeting to discuss a joint US-Canadian project on cumulative impact assessment in Prairie Wetlands that will carry into FY 1990 and FY 1991.

The Council has participated with other agencies in discussions relating to the ratification and implementation of the Montreal Protocol on Substances to Deplete the Ozone Layer, and on the Intergovernmental Panel on Climate Change. The Council has also participated in an interagency working group dealing with the export of hazardous wastes.

World Commission on Environment and Development

CEQ continues to be involved in follow-up work to the report of the World Commission. CEQ is a member of an interagency workgroup that has been reviewing the report and looking toward the 1990 Bergan Conference that follow-up the implementation of the recommendation by different governments.

Biodiversity

CEQ is a member of the State Department interagency working group on biological biodiversity. This group has been developing approaches to biological biodiversity through consideration of existing and proposed international agreements.

Tropical Forests

CEQ is a member of an interagency task for on tropical forests. This committee discussed matters related to activities of US agencies, particularly AID and the U.S. Forest Service, debt for nature swaps, the UNDP and Amazon Forestry Management, and Tropical Forestry Action Plan.

Antarctic

CEQ participates in a working group which is examining how to best interpret and eventually implement the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA). CEQ is also discussing with the National Science Foundation its responsibilities for implementing environmental laws in relation to its activities in the Antarctic.

Multilateral Development Bank Projects

CEQ is a member of an "early warning group" composed of several federal agencies which review proposals submitted to multilateral development banks (MDBs). The group attempts to identify projects with apparent environmental issues of significance. CEQ is also participating in discussions with the Department of the Treasury and other interested parties about environmental assessment procedures for MDB funded projects.

Whaling Moratorium

The Council continued its oversight of the work of the International Whaling Commission in FY 1989. CEQ is a member of an interagency committee to oversee implementation of the moratorium on commercial whaling which went into effect in 1986. Several nations have continued to conduct whaling activities which are contrary to the moratorium, and the United States has, in some instances, imposed economic sanctions on such countries.

International Environmental Agreements

CEQ has continued its involvement in two bi-lateral agreements, one with the Soviet Union and one with Japan. In FY 1988, CEQ continued to participate in the "Agreement on Cooperation in the Field of Environmental Protection" between the United States and the Soviet Union. A CEQ official serves as the Project Leader for Area XI (Legal and Administrative Measures for Protecting

Environmental Quality). In FY89, CEQ led a delegation of seven American attorneys to the Soviet Union for a meeting with Soviet officials. This is a particularly significant period in the development of Soviet environmental law. The Soviet government is in the process of establishing a new agency for environmental protection, and is drafting new environmental laws, as well as expanding its role in the field of international environmental cooperation.

Similarly, the General Counsel co-chairs a project on environmental assessment under the "Agreement between the Government of the United States and the Government of Japan on Cooperation in the Field of Environmental Protection." In FY 1989, CEQ continues to exchange information with officials of the Environment Agency of Japan under the terms of the Agreement.

Executive Order No. 12114

CEQ completed a comprehensive survey of federal agency compliance with Executive Order No. 12114 (Environmental Effects of Federal Actions Abroad) during FY 1988, and compiled a summary of the responses. That information was used, in part, to develop CEQ's position on amendments to NEPA which were introduced in the Congress during FY 1989. One amendment would extend the procedural requirements of NEPA to extraterritorial actions; the second amendment would require the Department of the Treasury to implement an environmental impact assessment process to support United States voting decisions in the multilateral development banks. CEQ will be working with OMB and the other involved agencies to formulate an Administration position on these important issues.

Emerging Technologies

CEQ has actively participated in biotechnology programs of international organizations such as the Organization for Economic Cooperation and Development (OECD) and the Commission of the European Communities, seeking to develop environmentally sensitive principles for biotechnology research and development.

CEQ is considering initiating a project to look at broader approaches to the consideration of environmental issues in the development of emerging technologies. These approaches will seek to include environmental considerations early in the research and development process while not deterring innovation.

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STATUATORY AUTHORITY

Basic Responsibilities

National Environmental Policy Act of 1969

SEC. 102 (2)(2)
[All agencies of the Federal Government shall identifiy and develop methods and procedures, in consultation with the Council on Environmental Quality...which shall ensure that presently unquantified environmental amenities and values may be given appropriate considerations in decisionmaking along with economic and technical considerations.

SEC. 201. The President shall transmit to the Congress annually beginning July 1, 1970, an Environmental Quality Report (hereinafter referred to as the "report") which shall set forth (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the aquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including but not limited to forest, dryland, wetland, range, urban, suburban and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nations in the light of expected population pressures; (4) a review of the programs and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.

Enviromental Quality Improvement Act of 1970

SEC. 204. It shall be the duty and function of the Council-
(1) to assist and advise the President in the preparation of the Environmental Quality Report required by section 201 of this title;
(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of the Act, and to compile and submit to the President studies relating to such conditions and trends; (3) to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto; (4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation; (5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality; (6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes; (7) to report at least once each year to the President on the state and condition of the environment; and (8) to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

(d) In carrying out his functions the Director shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality by-
(1) Providing the professional and administrative staff and support for the Council on Environmental Quality established by Public Law 91-190;
(2) Assisting the Federal agencies and departments in appraising the effectiveness of existing and proposed facilities, programs, policies,

and activities of the Federal Government, and those specific major projects designated by the President which do not require individual project authorization by Congress, which affect environmental quality;
(3) Reviewing the adequacy of existing systems for monitoring and predicting environmental changes in order to achieve effective coverage and efficient use of research facilities and other resources;
(4) Promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encourage the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man;
(5) Assisting in coordinating among the Federal departments and agencies those programs and activities which affect, protect, and improve environmental quality;
(6) Assisting the Federal departments and agencies in the development and interrelationship of environmental quality criteria and standards established through the Federal Government;
(7) Collecting, collating, analyzing, and interpreting data and information on environmental quality, ecological research, and evaluation.
(e) The Director is authorized to contract with public or private agencies, institutions, and organizations and with individuals without regard to sections 3618 and 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5) in carrying out his functions.

Other Statutory Responsibilities

Urban Mass Transportation Assistance Act (1970)

49 U.S.C. 1610
CEQ must be consulted by the Secretary of Transportation in carrying out the policy of this title to preserve the natural beauty of the countryside, etc., in designing and constructing urban mass transportation projects for which federal assistance is provided.

Airport and Airway Development Act (1970), As Amended

49 U.S.C. 2203
"National airport and airway system plans" Title V of Pub.L. 97-248, Sept. 3, 1982, 96 Stat. 695.

Formerly, under 49 U.S.C. 1712, CEQ was listed as an agency to be consulted for recommendations in the development of a national airport system plan.

The 1982 law, cited above, does not specifically mention CEQ. The comparable section, 49 U.S.C. 2203, "Consultation with Federal and public agencies and aviation community" states: "In reviewing and revising the national airport system plan, the Secretary shall consult, to the extent feasible and as appropriate, with other Federal and public agencies, and with the aviation community."

Marine Mammal Protection Act (1972)

16 U.S.C. 1401
CEQ and certain other agencies are given the responsibility for submitting lists of individuals qualified for service on the Marine Mammal Commission from which the President selects members.
16 U.S.C. 1403
CEQ must be consulted by the Marine Mammal Commission in establishing a Committee of Scientific Advisors on Marine Mammals.

Non-nuclear Energy Research and Development Act (1974), As Amended

42 U.S.C. 5912 (e) (7)
The Water Resources Council must consult CEQ in its assessments of water resource requirements and water supply availability for any non-nuclear energy technology.

Coastal Zone Management Act Amendments (1976), As Amended

The Chairman of the Council, or his designated representative has responsibility for participating, on behalf of the Federal Government, in Federal-state consultations regarding marine and coastal zone problems.

National Science and Technology Policy Organization and Priorities Act (1976)

42 U.S.C. 1456(c)
The Director of the Office of Science and Technology Policy will work in close cooperation and consultation with CEQ.

Toxic Substances Control Act (TSCA) (1977)

15 U.S.C. 2603 (e) 2A
The Chairman of CEQ shall appoint one person from the Council to the Interagency Testing Committee, established to make recommendations to the EPA Administrator regarding those chemical substances and mixtures which should be given priority consideration for the promulgation of a testing requirement rule under §2603 (a).

Department of Energy Organization Act (1977)

42 U.S.C. 7265
A representative of CEQ shall be entitled to participate in the deliberations of the Regional Energy Advisory Boards.

National Climate Program Act (1978)

15 U.S.C 2904
CEQ will have a role in the National Climate Program as defined by the President. The Secretary of Commerce has lead agency responsibility. The Program will assist the Nation and the world in understanding and responding to natural and man-induced climate processes and their implications.

Endangered Species Act Amendments (1978)

16 U.S.C. 1536 (1)
Any agency granted an exemption under subsection (h) must submit to CEQ a report describing its compliance with the necessary mitigation and compliance methods. The reports, which CEQ must publish in the Federal Register, shall be annually submitted until all such measures are completed.

Small Hydroelectric Power Projects (1973)

16 U.S.C. 2705 (b)
CEQ must be consulted prior to the issuance of any licenses under the Federal Power Act.

Health Services and Center's Amendments (1978), As Amended

42 U.S.C. 242b (d)(3)
The 1981 amendment, Pub.L. 97-35, Aug.13, 1981, 95 Stat. 565.

CEQ shall participate in a study of the present and projected health costs of pollution and other environmental conditions resulting from human activity. The report is to be completed not later than 18 months after November 9,1978.

The subject report was to be the forst of ongoing studies. The statute authorized subsequent studies to be made every two years. The 1981 amendment changed the requirement to report every three years.

Energy Security Act (1980)

42 U.S.C. 8902
Establishes a comprehensive program to study the causes and effects of acid rain.

The Council on Environmental Quality shall, in conjunction with other members of the Acid Precipitation Task Force, prepare a research plan and a study identifying the causes and effects of acid rain and methods to ameliorate the harmful effects of acid precipitation. (42 USC 8902)

EXECUTIVE ORDERS:

Executive Orders 11644 and 11989, Off-Road Vehicles on Federal Lands. CEQ has oversight responsibility.

E.O. 12114, Environmental Effects of Major Federal Actions Abroad. CEQ has oversight responsibility. Shared with the Department of State.

Nuclear Waste Policy Act of 1982 (January 7, 1983)

96 Stat. 2201
The Council on Environmental Quality (along with The Environmental Protection Agency, and others) is charged with reviewing guidelines, issued by the Secretary of Energy, for the recommendation of sites for repositories [of high-level radioactive waste and spent nuclear fuel]. (42 USC 10132)

The Council on Environmental Quality, and other specified agencies, will comment on Environmental Impact Statements for proposed nuclear waste repository sites. (42 USC 10134)

The Council was also given responsibility, along with other agencies, for reviewing such guidelines as are issued by the Secretary of Energy, for the selection of site for a test and evaluation facility. (42 USC 10193)

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